



R410A

Commercial Air Conditioners

# Engineering Data

## MDV8 Series VRF



MDVO-V8252V2R1B(ECO)	MDVO-V8560V2R1B(ECO)
MDVO-V8280V2R1B(ECO)	MDVO-V8615V2R1B(ECO)
MDVO-V8335V2R1B(ECO)	MDVO-V8670V2R1B(ECO)
MDVO-V8400V2R1B(ECO)	MDVO-V8730V2R1B(ECO)
MDVO-V8450V2R1B(ECO)	MDVO-V8785V2R1B(ECO)
MDVO-V8500V2R1B(ECO)	MDVO-V8850V2R1B(ECO)
	MDVO-V8900V2R1B(ECO)



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# Part 1

## General Information

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# 1 Indoor and Outdoor Unit Capacities

## 1.1 Indoor Units

### 1.1.1 Standard indoor units

Table 1-1.1: Standard indoor unit abbreviation codes

Abbreviation code	Type
C1	One-way Cassette
C2	Two-way Cassette
C4C	Compact Four-way Cassette
C4	Four-way Cassette
D1	Arc Duct
D2	Medium Static Pressure Duct

Abbreviation code	Type
D3	High Static Pressure Duct
WM	Wall-mounted
CF	Ceiling & Floor
FS	Floor Standing (Exposed/Concealed)
F	Floor Standing

Table 1-1.2: Standard indoor unit capacity range

Capacity		Capacity index	C1	C2	C4C	C4	D1	D2	D3	WM	CF	FS	F
kW	HP												
1.5	0.5	15	—	—	15	—	15	15	—	—	—	—	—
1.8	0.6	18	18	—	—	—	—	—	—	—	—	—	—
2.2	0.8	22	22	22	22	—	22	22	—	22	—	22	—
2.8	1	28	28	28	28	28	28	28	—	28	—	28	—
3.6	1.25	36	36	36	36	36	36	36	—	36	36	36	—
4.5	1.6	45	45	45	45	45	45	45	—	45	45	45	—
5.6	2	56	56	56	56	56	56	56	—	56	56	56	—
6.3	2.25	63	—	—	63	—	—	—	—	—	—	—	—
7.1	2.5	71	71	71	—	71	71	71	71	71	71	71	—
8.0	3	80	—	—	—	80	80	80	80	80	80	80	—
9.0	3.2	90	—	—	—	90	90	90	90	90	90	—	—
10.0	3.6	100	—	—	—	100	100	—	—	—	—	—	—
11.2	4	112	—	—	—	112	112	112	112	—	112	—	—
12.5	4.5	125	—	—	—	—	—	125	—	—	—	—	—
14.0	5	140	—	—	—	140	—	140	140	—	140	—	—
16.0	6	160	—	—	—	160	—	160	160	—	160	—	—
20.0	7	200	—	—	—	—	—	—	200	—	—	—	—
22.4	8	224	—	—	—	—	—	—	—	—	—	—	224
25.0	9	250	—	—	—	—	—	—	250	—	—	—	—
28.0	10	280	—	—	—	—	—	—	280	—	—	—	280
40.0	14	400	—	—	—	—	—	—	400	—	—	—	—
45.0	16	450	—	—	—	—	—	—	450	—	—	—	—
56.0	20	560	—	—	—	—	—	—	560	—	—	—	—

### 1.1.2 Fresh air processing unit

Table 1-1.3: Fresh air processing unit capacity range

Capacity	11.2kW	12.5kW	14kW	20kW	25kW	28kW	45kW	56kW
Capacity index	112	125	140	200	250	280	450	560

## 1.2 Heat recovery ventilator

Table 1-1.4: Heat recovery ventilator capacity range

Airflow rate	200m <sup>3</sup> /h	300m <sup>3</sup> /h	400m <sup>3</sup> /h	500m <sup>3</sup> /h	800m <sup>3</sup> /h	1000m <sup>3</sup> /h	1500m <sup>3</sup> /h	2000m <sup>3</sup> /h
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**1.3 Outdoor Units**
*Table 1-1.5: Outdoor unit capacity range*

Capacity	Model Name	Combination Type
8HP	MDVO-V8252V2R1B(ECO)	/
10HP	MDVO-V8280V2R1B(ECO)	/
12HP	MDVO-V8335V2R1B(ECO)	/
14HP	MDVO-V8400V2R1B(ECO)	/
16HP	MDVO-V8450V2R1B(ECO)	/
18HP	MDVO-V8500V2R1B(ECO)	/
20HP	MDVO-V8560V2R1B(ECO)	/
22HP	MDVO-V8615V2R1B(ECO)	/
24HP	MDVO-V8670V2R1B(ECO)	/
26HP	MDVO-V8730V2R1B(ECO)	/
28HP	MDVO-V8785V2R1B(ECO)	/
30HP	MDVO-V8850V2R1B(ECO)	/
32HP	MDVO-V8900V2R1B(ECO)	/
34HP	MDVO-V8960V2R1B(ECO)	20HP+14HP
36HP	MDVO-V81010V2R1B(ECO)	20HP+16HP
38HP	MDVO-V81070V2R1B(ECO)	24HP+14HP
40HP	MDVO-V81120V2R1B(ECO)	24HP+16HP
42HP	MDVO-V81170V2R1B(ECO)	24HP+18HP
44HP	MDVO-V81230V2R1B(ECO)	22HP+22HP
46HP	MDVO-V81285V2R1B(ECO)	24HP+22HP
48HP	MDVO-V81340V2R1B(ECO)	24HP+24HP
50HP	MDVO-V81400V2R1B(ECO)	32HP+18HP
52HP	MDVO-V81460V2R1B(ECO)	32HP+20HP
54HP	MDVO-V81515V2R1B(ECO)	32HP+22HP
56HP	MDVO-V81570V2R1B(ECO)	32HP+24HP
58HP	MDVO-V81630V2R1B(ECO)	32HP+26HP
60HP	MDVO-V81685V2R1B(ECO)	32HP+28HP
62HP	MDVO-V81750V2R1B(ECO)	32HP+30HP
64HP	MDVO-V81800V2R1B(ECO)	32HP+32HP
66HP	MDVO-V81860V2R1B(ECO)	32HP+20HP+14HP
68HP	MDVO-V81910V2R1B(ECO)	32HP+20HP+16HP
70HP	MDVO-V81970V2R1B(ECO)	32HP+24HP+14HP
72HP	MDVO-V82020V2R1B(ECO)	32HP+24HP+16HP
74HP	MDVO-V82070V2R1B(ECO)	32HP+24HP+18HP
76HP	MDVO-V82130V2R1B(ECO)	32HP+22HP+22HP
78HP	MDVO-V82185V2R1B(ECO)	32HP+24HP+22HP
80HP	MDVO-V82240V2R1B(ECO)	32HP+24HP+24HP
82HP	MDVO-V82300V2R1B(ECO)	32HP+32HP+18HP
84HP	MDVO-V82360V2R1B(ECO)	32HP+32HP+20HP
86HP	MDVO-V82415V2R1B(ECO)	32HP+32HP+22HP
88HP	MDVO-V82470V2R1B(ECO)	32HP+32HP+24HP
90HP	MDVO-V82530V2R1B(ECO)	32HP+32HP+26HP
92HP	MDVO-V82585V2R1B(ECO)	32HP+32HP+28HP
94HP	MDVO-V82650V2R1B(ECO)	32HP+32HP+30HP
96HP	MDVO-V82700V2R1B(ECO)	32HP+32HP+32HP

**Notes:**



- The combinations of units shown in the table are factory-recommended. Four units combination are possible for the 8-24 HP models. For other combinations of units please contact your local distributor or technical support engineer.

## 2 External Appearance

### 2.1 Indoor Units



#### 2.1.1 Standard indoor units

Table 1-2.1: Standard indoor unit appearance

One-way Cassette C1		Two-way Cassette C2	
Compact Four-way Cassette C2		Four-way Cassette C4	
Arc Duct D1		Medium Static Pressure Duct D2	
High Static Pressure Duct D3		Floor Standing F	
Wall-mounted WM		Ceiling & Floor CF	
Floor Standing FS			


#### 2.1.2 Fresh air processing unit

Table 1-2.2: Fresh air processing unit appearance

Fresh Air Processing Unit OA		Small Airflow Rate Fresh Air Processing Unit OAS	
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### 2.2 Heat Recovery Ventilator

Table 1-2.3: Heat recovery ventilator appearance








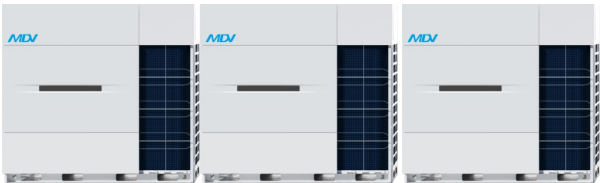
Heat Recovery Ventilator	
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**2.3 Outdoor Units**
**2.3.1 Single units**
*Table 1-2.4: Single outdoor unit appearance*

8/10/12/14/16HP (with single fan)	18/20/22/24HP (with dual fans)	26/28/30/32HP (with dual fans)
		

**2.3.2 Combinations of units**
*Table 1-2.5: Combination outdoor unit appearance*

<b>34/36/38/40HP</b> 	<b>42/44/46/48HP</b> 	<b>50/52/54/56HP</b> 
<b>58/60/62/64HP</b> 	<b>66/68/70/72HP</b> 	<b>74/76/78/80HP</b> 
<b>82/84/86/88HP</b> 		<b>90/92/94/96HP</b> 

### 3 Outdoor Unit Combinations

Table 1-3.1: Outdoor unit combinations

System capacity		No. of units	Modules <sup>1</sup>													Outdoor branch joint kit <sup>2</sup>	
kW	HP		8	10	12	14	16	18	20	22	24	26	28	30	32		
25.2	8	1	•														
28.0	10	1		•													
33.5	12	1			•												
40.0	14	1				•											
45.0	16	1					•										
50.0	18	1						•									
56.0	20	1							•								
61.5	22	1								•							
67.0	24	1									•						
73.0	26	1										•					
78.5	28	1											•				
85.0	30	1												•			
90.0	32	1													•		
96.0	34	2					•			•							
101.0	36	2						•		•							
107.0	38	2					•					•					
112.0	40	2						•				•					
117.0	42	2							•			•					
123.0	44	2								••							
128.5	46	2								•		•					
134.0	48	2										••					
140.0	50	2							•								•
146.0	52	2								•							•
151.5	54	2									•						•
157.0	56	2										•					•
163.0	58	2											•				•
168.5	60	2												•			•
175.0	62	2													•		•
180.0	64	2														••	•
186.0	66	3					•			•							•
191.0	68	3						•		•							•
197.0	70	3					•					•					•
202.0	72	3						•				•					•
207.0	74	3							•			•					•
213.0	76	3								••							•
218.5	78	3								•		•					•
224.0	80	3										••					•
230.0	82	3							•								••
236.0	84	3								•							••
241.5	86	3									•						••
247.0	88	3										•					••
253.0	90	3											•				••
258.5	92	3												•			••
265.0	94	3													•		••
270.0	96	3														•••	•••

- Notes:
- The combinations of units shown in the table are factory-recommended. Four units combination are possible for the 8-24 HP models. For other combinations of units please contact your local distributor or technical support engineer.
  - For systems with two or more outdoor units, outdoor branch joints (sold separately) are required.

## 4 Nomenclature

### 4.1 Indoor Units

#### 4.1.1 Standard indoor units

##### 3rd generation indoor units

MDV   I3A   =   28   C4   V   R1   2E  
 ①            ②            ③            ④            ⑤            ⑥            ⑦

Legend		
No.	Code	Remarks
1	MDV	MDV brand
2	I3A	3 <sup>rd</sup> generation VRF indoor unit
3	28	Capacity index (the capacity in kW multiplied by 10)
4	C4	Indoor unit type C1: One-way Cassette C2: Two-way Cassette C4C: Compact Four-way Cassette C4: Four-way Cassette D1: Arc Duct D2: Medium Static Pressure Duct D3: High Static Pressure Duct WM: Wall-mounted CF: Ceiling & Floor FS: Floor Standing (Exposed/Concealed)
5	V	Series category (V: DC series)
6	R1	Refrigerant type (R1: R410A&R32)
7	2E	2D: 1 phase, 220-240V, 50/60Hz 2E: 1 phase, 220-240V, 50Hz

# MDV8 ECO VRF 50Hz



## 2<sup>nd</sup> generation DC Indoor Units

MDV   I   =   22   C1   V   R1   E  
 ①   ②   ③   ④   ⑤   ⑥   ⑦

Legend		
No.	Code	Remarks
1	MDV	MDV brand
2	I	VRF indoor unit
3	22	Capacity index (the capacity in kW multiplied by 10)
4	C1	Indoor unit type C1: One-way Cassette C2: Two-way Cassette C4C: Compact Four-way Cassette C4: Four-way Cassette D2: Medium Static Pressure Duct D3: High Static Pressure Duct WM: Wall-mounted CF: Ceiling & Floor FS: Floor Standing
5	V	Series category (V: DC series)
6	R1	Refrigerant type (N1: R410A)
7	E	Power supply E: 1 phase, 220-240V, 50Hz

## 2<sup>nd</sup> generation AC Indoor Units

MDV   I   =   22   C1   R1   E  
 ①   ②   ③   ④   ⑤   ⑥   ⑦

Legend		
No.	Code	Remarks
1	MDV	MDV brand
2	I	VRF indoor unit
3	22	Capacity index (the capacity in kW multiplied by 10)
4	C1	Indoor unit type C1: One-way Cassette C2: Two-way Cassette C4C: Compact Four-way Cassette C4: Four-way Cassette D2: Medium Static Pressure Duct D3: High Static Pressure Duct WM: Wall-mounted CF: Ceiling & Floor FS: Floor Standing
5	omit	Series category (omit: AV series   V: DC series)
6	R1	Refrigerant type (N1: R410A)
7	E	Power supply E: 1 phase, 220-240V, 50Hz

**4.1.2 Fresh air processing unit**
**2<sup>nd</sup> generation**

MDV   I   =   140   OA   V   R1   E  
 ①            ②            ③            ④            ⑤            ⑥            ⑦

Legend		
No.	Code	Remarks
1	MDV	Midea MDV brand
2	I	VRF indoor unit
3	280	Capacity index (the capacity in kW multiplied by 10)
4	OA	Indoor unit type OA: Fresh Air Processing Unit
5	V	Series category (V: DC series)
6	R1	Refrigerant type (N1: R410A)
7	E	Power supply D: 1 phase, 220-240V, 50/60Hz E: 1 phase, 220-240V, 50Hz

**3rd generation**

MDV   I3A   =   280   OA   V   R1   2E  
 ①            ②            ③            ④            ⑤            ⑥            ⑦

Legend		
No.	Code	Remarks
1	MDV	MDV brand
2	I3A	3 <sup>rd</sup> generation VRF indoor unit
3	280	Capacity index (the capacity in kW multiplied by 10)
4	OA	Indoor unit type OA: Fresh Air Processing Unit OAS: Small Airflow Fresh Air Processing Unit
5	V	Series category (V: DC series)
6	R1	Refrigerant type (R1: R410A&R32)
7	2E	2D: 1 phase, 220-240V, 50/60Hz 2E: 1 phase, 220-240V, 50Hz

**4.1.3 Heat recovery ventilator**
**AC Series**

HRV   =   200  
 ①            ②

Legend		
No.	Code	Remarks
1	HRV	Heat recovery ventilator
2	200	Airflow in m <sup>3</sup> /h

HRV - D 200  
 ①            ②            ③

Legend		
No.	Code	Remarks
1	HRV	Heat recovery ventilator
2	D	Series category (D: DC series)
3	200	Airflow in m <sup>3</sup> /h

4.2 Outdoor Units

MDV O V8 - 252 V2 R1 B (ECO)  
 ①            ②            ③            ④            ⑤            ⑥            ⑦            ⑧

Legend		
No.	Code	Remarks
1	MDV	MDV brand
2	O	Unit category (O: VRF outdoor unit)
3	V8	MDV8 series VRF
4	252	Capacity index (the capacity in kW multiplied by 10)
5	V2	Type (V2: All DC inverter)
6	R1	Refrigerant type (R1: R410A)
7	B	Power supply (B: 3 phase, 380-415V, 50Hz)
9	ECO	ECO series

5 Combination Ratio

Combination ratio = $\frac{\text{Sum of capacity indexes of the indoor units}}{\text{Capacity index of the outdoor units}}$
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Table 1-5.1: Indoor and outdoor unit combination ratio limitations

Type	Minimum combination ratio	Maximum combination ratio		
		Standard indoor units only	Fresh air processing units only	Fresh air processing units and standard indoor units together
V8 Series outdoor units	50%	150% <sup>1,2,3</sup> (Single ODU) 130% (Combined ODU)	100%	100% <sup>4</sup>

- Notes:
- All the indoor units connected should be indoor units with ø5mm size copper tube heater exchanger. This limitation is to avoid too big indoor unit exchanger cause reliability and performance problem.
  - Piping between farthest indoor unit and first indoor branch joint should less than 40m.
  - Combination ratio greater than 130% is available as a customization option.
  - When fresh air processing units are installed together with standard indoor units, the total capacity of the fresh air processing units must not exceed 30% of the total capacity of the outdoor units and the total combination ratio must not exceed 100%.
  - The combinations of units shown in the table are factory-recommended. Four units combination are possible for the 8-24 HP models. For other combinations of units please contact your local distributor or technical support engineer.

Table 1-5.2: Combinations of indoor and outdoor units

Outdoor unit capacity			Sum of capacity indexes of connected indoor units (standard indoor units only)	Sum of capacity indexes of connected indoor units (fresh air processing units and standard indoor units together)	Maximum number of connected indoor units
kW	HP	Capacity index			
25.2	8	252	126 to 327.6	126 to 252	13
28.0	10	280	140 to 364	140 to 280	16
33.5	12	335	167.5 to 435.5	167.5 to 335	19
40.0	14	400	200 to 520	200 to 400	23
45.0	16	450	225 to 585	225 to 450	26
50.0	18	500	250 to 650	250 to 500	29
56.0	20	560	280 to 728	280 to 560	33
61.5	22	615	307.5 to 799.5	307.5 to 615	36
67.0	24	670	335 to 871	335 to 670	39
73.0	26	730	365 to 949	365 to 730	43
78.5	28	785	392.5 to 1020.5	392.5 to 785	46
85.0	30	850	425 to 1105	425 to 850	50
90.0	32	900	450 to 1170	450 to 900	53
96.0	34	960	480 to 1248	480 to 960	56
101.0	36	1010	505 to 1313	505 to 1010	59
107.0	38	1070	535 to 1391	535 to 1070	62
112.0	40	1120	560 to 1456	560 to 1120	64
117.0	42	1170	585 to 1521	585 to 1170	
123.0	44	1230	615 to 1599	615 to 1230	
128.5	46	1285	642.5 to 1670.5	642.5 to 1285	
134.0	48	1340	670 to 1742	670 to 1340	
140.0	50	1400	700 to 1820	700 to 1400	
146.0	52	1460	730 to 1898	730 to 1460	
151.5	54	1515	757.5 to 1969.5	757.5 to 1515	
157.0	56	1570	785 to 2041	785 to 1570	
163.0	58	1630	815 to 2119	815 to 1630	
168.5	60	1685	842.5 to 2190.5	842.5 to 1685	
175.0	62	1750	875 to 2275	875 to 1750	
180.0	64	1800	900 to 2340	900 to 1800	
186.0	66	1860	930 to 2418	930 to 1860	
191.0	68	1910	955 to 2483	955 to 1910	
197.0	70	1970	985 to 2561	985 to 1970	
202.0	72	2020	1010 to 2626	1010 to 2020	
207.0	74	2070	1035 to 2691	1035 to 2070	
213.0	76	2130	1065 to 2769	1065 to 2130	
218.5	78	2185	1092.5 to 2840.5	1092.5 to 2185	
224.0	80	2240	1120 to 2912	1120 to 2240	
230.0	82	2300	1150 to 2990	1150 to 2300	
236.0	84	2360	1180 to 3068	1180 to 2360	
241.5	86	2415	1207.5 to 3139.5	1207.5 to 2415	
247.0	88	2470	1235 to 3211	1235 to 2470	
253.0	90	2530	1265 to 3289	1265 to 2530	
258.5	92	2585	1292.5 to 3360.5	1292.5 to 2585	
265.0	94	2650	1325 to 3445	1325 to 2650	
270.0	96	2700	1350 to 3510	1350 to 2700	

## 6 Selection Procedure

### 6.1 Procedure

#### Step 1: Establish design conditions

Design temperature and humidity (indoor and outdoor)  
 Required heat load of each room  
 System peak load  
 Piping length, level differences  
 Indoor unit specifications (type and quantity)

#### Step 2: Select indoor units

Decide indoor unit safety factor

Select indoor unit models ensuring that:  
 $\text{Indoor unit capacity corrected for indoor air temperature WB}^1 \geq \text{Required heat load} \times \text{Indoor unit safety factor}$

#### Step 3: Select outdoor units

Determine required total heat load on outdoor units

Use the sum of the peak load of each room      Use the system peak load

Provisionally select outdoor unit capacity based on combination ratio limitations

Confirm that the number of indoor units connected to the outdoor units is within limitation

Correct cooling and heating capacities of the outdoor units for the following items:  
 Outdoor air temperature / Indoor air temperature WB / Combination ratio / Piping length, level difference / Piping heat loss / Frost accumulation (for heating capacity only)

Is corrected outdoor unit capacity  $\geq$  Required total heat load on outdoor units?

No

Yes

VRF system selection is complete

Notes:

1. If the indoor design temperature falls between two temperatures listed in the indoor unit's capacity table, calculate the corrected capacity by interpolation. If the indoor unit selection is to be based on total heat load and sensible heat load, select indoor units which satisfy not only the total heat load requirements of each room but also the sensible heat load requirements of each room. As with total heat capacity, the sensible heat capacity of indoor units should be corrected for indoor temperature, interpolating where necessary. For the indoor unit capacity tables, refer to the indoor unit technical manuals.



## 6.2 Example

The following is a selection example based on total heat load for cooling.

Figure 1-6.1: Room plan

Room A	Room H	Room G	Room F
Room B	Room C	Room D	Room E

### Step 1: Establish design conditions

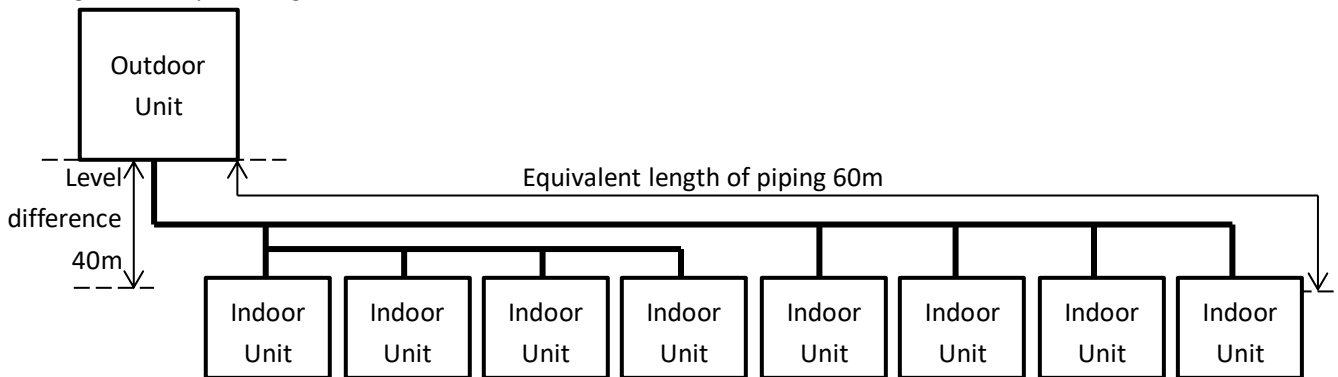
- Indoor air temperature 25.8°C DB, 18°C WB; outdoor air temperature 33°C DB.
- Determine peak load of each room and system peak load. As shown in Table 1-6.1, the system peak load is 50.7kW.

Table 1-6.1: Required heat load of each room (kW)

Time	Room A	Room B	Room C	Room D	Room E	Room F	Room G	Room H	Total
9:00	4.8	4.8	3.0	3.0	9.1	9.0	2.9	2.9	39.5
12:00	6.6	7.1	5.1	5.1	7.4	6.8	4.0	4.0	46.1
14:00	9.0	9.4	4.9	4.9	7.3	6.8	4.2	4.2	50.7
16:00	10.6	10.7	3.9	3.9	6.3	6.2	3.8	3.8	49.2

- The maximum piping lengths and level differences in this example are as given in Figure 1-6.2.

Figure 1-6.2: System diagram



- Indoor unit type for all rooms: Medium Static Pressure Duct (D2).

### Step 2: Select indoor units

- In this example, a safety factor is not used (i.e. the safety factor is 1).
- Select indoor unit models using the medium static pressure duct cooling capacity table. Each indoor unit's corrected capacity needs to be greater than or equal to the peak load of the relevant room. The selected indoor units are shown in Table 1-6.3.

Table 1-6.2: Extract from medium static pressure duct (D2) cooling capacity table

Model	Capacity index	Indoor air temperature													
		14°C WB		16°C WB		18°C WB		19°C WB		20°C WB		22°C WB		24°C WB	
		20°C DB		23°C DB		26°C DB		27°C DB		28°C DB		30°C DB		32°C DB	
		TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC
D2	22	1.5	1.4	1.8	1.5	2.1	1.6	2.2	1.6	2.3	1.7	2.4	1.5	2.4	1.5
	28	1.9	1.7	2.3	1.9	2.6	2.1	2.8	2.1	3.0	2.1	3.1	2.0	3.1	1.9
	36	2.5	2.1	2.9	2.3	3.4	2.5	3.6	2.6	3.8	2.7	4.2	2.8	3.9	2.3
	45	3.1	2.6	3.7	2.8	4.2	3.1	4.5	3.2	4.8	3.2	4.9	3.1	5.1	2.9
	56	3.9	3.0	4.6	3.3	5.3	3.6	5.6	3.7	5.9	3.8	6.2	3.7	6.2	3.4
	71	4.9	3.9	5.8	4.3	6.7	4.7	7.1	4.9	7.5	4.8	7.8	4.6	7.8	4.3
	80	5.5	4.4	6.6	4.9	7.5	5.3	8.0	5.5	8.4	5.5	8.8	5.2	8.8	4.8
	90	6.2	5.3	7.3	5.8	8.4	6.3	9.0	6.4	9.6	6.5	9.9	6.1	9.9	5.7
	112	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	12.5	7.8	12.5	7.4
	140	9.7	7.8	11.3	8.6	13.2	9.6	14.0	9.8	14.8	9.8	15.7	9.7	15.4	8.8

Abbreviations:  
TC: Total capacity (kW); SC: Sensible capacity (kW)

Table 1-6.3: Selected indoor units

	Room A	Room B	Room C	Room D
Peak heat load (kW)	10.6	10.7	5.1	5.1
Selected indoor unit	MDVI-140D2VR1E	MDVI-140D2VR1E	MDVI-56D2VR1E	MDVI-56D2VR1E
Corrected TC (kW)	13.2	13.2	5.3	5.3
	Room E	Room F	Room G	Room H
Peak heat load (kW)	9.1	9.0	4.2	4.2
Selected indoor unit	MDVI-112D2VR1E	MDVI-112D2VR1E	MDVI-45D2VR1E	MDVI-45D2VR1E
Corrected TC (kW)	10.5	10.5	4.2	4.2

**Step 3: Select outdoor units**

- Determine the required total heat load from the indoor units to the outdoor units based on either the sum of the peak loads of each room or the system peak load. In this example, it is determined based on the system peak load. Therefore, the required heat load is 50.7kW.
- Provisionally select outdoor units using the sum of the capacity indexes (CIs) of the selected indoor units (as shown in Table 1-6.4), ensuring that the combination ratio is between 50% and 130%. Refer to Table 1-6.5. As the sum of CIs of the indoor units is 706, outdoor units from 20HP to 50HP are potentially suitable. Start from the smallest, which is the 20HP unit.

Table 1-6.4: Sum of indoor unit capacity indexes

Model	Capacity Index	No. of units
MDVI-140D2VR1E	140	2
MDVI-112D2VR1E	112	2
MDVI-56D2VR1E	56	2
MDVI-45D2VR1E	45	2
<b>Sum of CIs</b>	<b>706</b>	

*Table 1-6.5: Extract from Table 1-5.2 Combinations of Indoor and outdoor units*

Outdoor unit capacity			Sum of capacity indexes of connected indoor units (standard indoor units only)	Maximum number of connected indoor units
kW	HP	Capacity index		
50.0	18	500	250 to 650	29
56.0	20	560	280 to 728	33
61.5	22	615	307.5 to 799.5	36
67.0	24	670	335 to 871	39
73.0	26	730	365 to 949	43
78.5	28	785	392.5 to 1020.5	46
85.0	30	850	425 to 1105	50
90.0	32	900	450 to 1170	53
96.0	34	960	480 to 1248	56
101.0	36	1010	505 to 1313	59
107.0	38	1070	535 to 1391	62
112.0	40	1120	560 to 1456	64
117.0	42	1170	585 to 1521	
123.0	44	1230	615 to 1599	
128.5	46	1285	642.5 to 1670.5	
134.0	48	1340	670 to 1742	
140.0	50	1400	700 to 1820	
146.0	52	1460	730 to 1898	

- The number of connected indoor units is 8 and the maximum number of connected indoor units on the 20HP outdoor unit is 33, so the number of connected indoor units is within the limitation.
- Calculate the corrected capacity of the outdoor units:
  - a) The sum of the indoor unit CIs is 706 and the CI of the 20HP outdoor unit MDVO-V8560V2R1B(ECO) is 560, so the combination ratio is  $706 / 560 = 126\%$ .
  - b) Using the outdoor units' cooling capacity table, interpolate to obtain the capacity ("B") corrected for outdoor air temperature, indoor air temperature, and combination ratio. Refer to Tables 1-6.6 and 1-6.7.

*Table 1-6.6: Extract from Table 2-8.7 MDVO-V8560V2R1B(ECO) cooling capacity*

CR	Outdoor air temp. (°C DB)	Indoor air temp. (°C DB / °C WB)	
		25.8 / 18.0	
		TC	PI
		kW	kW
130%	31	63.14	25.17
	33	62.17	25.48
	35	58.41	24.60
120%	31	59.30	24.96
	33	59.30	25.67
	35	56.87	25.29

*Table 1-6.7: Cooling capacity calculated by interpolation*

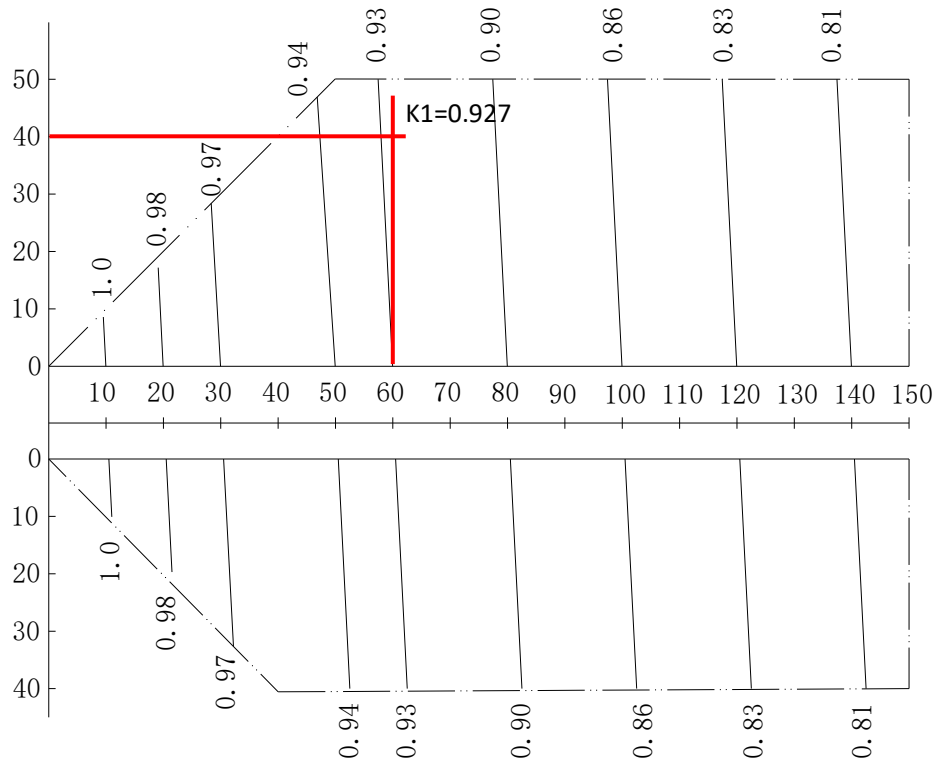
CR	Outdoor air temp. (°C DB)	Indoor air temp. (°C DB / °C WB)	
		25.8 / 18.0	
		TC	PI
		kW	kW
130%	33	62.17	25.48
		<b>B = 61.02<sup>1</sup></b>	
120%	33	59.30	25.67

Notes:

1.  $59.30 + (62.17 - 59.30) \times (126 - 120) / (130 - 120) = 61.02$

c) Find the correction factor for piping length and level difference ("K1")

Figure 1-6.3: V8 rate of change in cooling capacity



Notes:

1. The horizontal axis shows equivalent length of piping between farthest indoor unit and first outdoor branch joint; the vertical axis shows the largest level difference between indoor unit and outdoor unit. For level differences, positive values indicate that the outdoor unit is above the indoor unit, negative values indicate that the outdoor unit is below the indoor unit.

d) Calculate the corrected capacity of MDV8-V8560V2R1B(ECO) ("C") by using K1:

$$C = B \times K1 = 61.02 \times 0.927 = 56.57\text{kW}$$

- The corrected capacity 56.57kW is larger than required total heat load 50.7kW, so selection is complete. (In the event that the corrected capacity is lower than the required total heat load, Step 3 should be repeated from the point where the outdoor unit capacity is provisionally selected.)

# Part 2

# Outdoor Unit

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# 1 Specifications

## 8-14HP

Table 2-1.1: 8-14HP specifications

HP			8	10	12	14
Model			MDVO-V8252V2R1B(ECO)	MDVO-V8280V2R1B(ECO)	MDVO-V8335V2R1B(ECO)	MDVO-V8400V2R1B(ECO)
Power supply			380-415V, 3N~, 50Hz			
Cooling <sup>1</sup>	Capacity	kW	25.2	28.0	33.5	40.0
		kBtu/h	85.9	95.5	114.2	136.4
	Power input	kW	8.4	9.9	13.5	17.0
	EER			3.00	2.82	2.48
Heating <sup>2</sup> (Rated)	Capacity	kW	25.2	28.0	33.5	40.0
		kBtu/h	85.9	95.5	114.2	136.4
	Power input	kW	6.6	7.5	10.8	11.6
	COP			3.80	3.72	3.09
Heating <sup>2</sup> (Max)	Capacity	kW	27.0	31.5	37.5	45.0
		kBtu/h	92.1	107.4	127.9	153.5
	Power input	kW	7.6	9.0	12.9	14.4
	COP			3.57	3.51	2.90
SEER			7.11	6.74	6.24	6.17
η <sub>s,c</sub>			281.4%	266.6%	246.6%	243.8%
SCOP			3.98	3.99	4.01	4.04
η <sub>s,h</sub>			156.2%	156.6%	157.4%	158.6%
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity			
	Maximum quantity		13	16	19	23
Compressor	Type		DC inverter			
	Quantity		1			
	Oil type		FVC68D			
	Start-up method		Soft start			
Fan	Type		Propeller			
	Motor type		DC			
	Quantity		1			
	Motor output	kW	0.56	0.56	0.56	0.92
	Static pressure	Pa	0-20 (standard)20-80 (customized)			
	Airflow rate	m <sup>3</sup> /h	12600	12600	13500	15600
	Drive type		Direct			
Refrigerant	Type		R410A			
	Factory charge	kg	7	7	7	8.4
Pipe connections <sup>3</sup>	Liquid pipe	mm	Φ12.7	Φ12.7	Φ12.7	Φ15.9
	Gas pipe	mm	Φ25.4	Φ25.4	Φ25.4	Φ28.6
Sound pressure level <sup>4</sup>		dB(A)	58	58	61	65
Sound power level <sup>4</sup>		dB(A)	83	84	85	86
Net dimensions (W×H×D)		mm	940×1760×825			
Packed dimensions (W×H×D)		mm	1005×1945×890			
Net weight		kg	195	195	195	215
Gross weight		kg	213	213	213	232
Ambient temp. operation range	Cooling	°C	-15 to 55	-15 to 55	-15 to 55	-15 to 55
	Heating	°C	-30 to 30	-30 to 30	-30 to 30	-30 to 30

Notes:

- Indoor air temperature 27°C DB, 19°C WB; outdoor air temperature 35°C DB; equivalent refrigerant piping length 5m with zero level difference.
- Indoor air temperature 20°C DB; outdoor air temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 5m with zero level difference.
- Diameters given are those of the unit's stop valve.
- Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.

**16-22HP**

Table 2-1.2: 16-22HP specifications

HP			16	18	20	22
Model			MDVO-V8450V2R1B(ECO)	MDVO-V8500V2R1B(ECO)	MDVO-V8560V2R1B(ECO)	MDVO-V8615V2R1B(ECO)
Power supply			380-415V, 3N~, 50Hz			
Cooling <sup>1</sup>	Capacity	kW	45.0	50.0	56.0	61.5
		kBtu/h	153.5	170.5	191.0	209.7
	Power input	kW	22.0	20.4	26.0	27.7
	EER		2.05	2.45	2.15	2.22
Heating <sup>2</sup> (Rated)	Capacity	kW	45.0	50.0	56.0	61.5
		kBtu/h	153.5	170.5	191.0	209.7
	Power input	kW	14.0	15.1	17.2	18.4
	COP		3.21	3.31	3.25	3.35
Heating <sup>2</sup> (Max)	Capacity	kW	50.0	56.0	63.0	69.0
		kBtu/h	170.5	191.0	214.8	235.3
	Power input	kW	16.9	18.1	20.9	22.0
	COP		2.95	3.10	3.02	3.14
SEER			5.97	6.01	5.95	5.90
$\eta_{s,c}$			235.8%	237.4%	235%	233%
SCOP			3.97	4.04	3.95	4.13
$\eta_{s,h}$			155.8%	158.6%	155%	162.2%
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity			
	Maximum quantity		26	29	33	36
Compressor	Type		DC inverter			
	Quantity		1	2		
	Oil type		FVC68D			
	Start-up method		Soft start			
Fan	Type		Propeller			
	Motor type		DC			
	Quantity		1	2		
	Motor output	kW	0.92	0.56×2	0.56×2	0.56×2
	Static pressure	Pa	0-20 (default); 20-80 (customized)			
	Airflow rate	m <sup>3</sup> /h	15600	22000	22000	21500
	Drive type		Direct			
Refrigerant	Type		R410A			
	Factory charge	kg	8.4	9.3	9.3	11.96
Pipe connections <sup>3</sup>	Liquid pipe	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9
	Gas pipe	mm	Φ28.6	Φ28.6	Φ28.6	Φ28.6
Sound pressure level <sup>4</sup>		dB(A)	65	65	66	66
Sound power level <sup>4</sup>		dB(A)	86	88	89	89
Net dimensions (W×H×D)		mm	940×1760×825	1340×1760×825		
Packed dimensions (W×H×D)		mm	1005×1945×890	1405×1945×890		
Net weight		kg	215	295	295	315
Gross weight		kg	232	315	315	335
Ambient temp. operation range	Cooling	°C	-15 to 55	-15 to 55	-15 to 55	-15 to 55
	Heating	°C	-30 to 30	-30 to 30	-30 to 30	-30 to 30

## Notes:

- Indoor air temperature 27°C DB, 19°C WB; outdoor air temperature 35°C DB; equivalent refrigerant piping length 5m with zero level difference.
- Indoor air temperature 20°C DB; outdoor air temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 5m with zero level difference.
- Diameters given are those of the unit's stop valve.
- Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.

24-30HP

Table 2-1.3: 24-30HP specifications

HP			24	26	28	30
Model			MDVO-V8670V2R1B(ECO)	MDVO-V8730V2R1B(ECO)	MDVO-V8785V2R1B(ECO)	MDVO-V8850V2R1B(ECO)
Power supply			380-415V, 3N~, 50Hz			
Cooling1	Capacity	kW	67.0	73.0	78.5	85.0
		kBtu/h	228.5	248.9	267.7	289.9
	Power input	kW	32.7	38.2	32.4	37.8
	EER			2.05	1.91	2.42
Heating2(Rated)	Capacity	kW	67.0	73.0	78.5	85.0
		kBtu/h	228.5	248.9	267.7	289.9
	Power input	kW	20.2	23.2	24.5	27.3
	COP			3.31	3.15	3.20
Heating2(Max)	Capacity	kW	75.0	81.5	87.5	95.0
		kBtu/h	255.8	277.9	298.4	324.0
	Power input	kW	24.3	28.0	29.9	32.6
	COP			3.09	2.91	2.93
SEER			5.88	5.58	5.82	5.69
ηs,c			232.2%	220.2%	229.8%	224.6%
SCOP			3.98	4.05	4.01	3.88
ηs,h			156.2%	159%	157.4%	152.2%
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity			
	Maximum quantity		39	43	46	50
Compressor	Type		DC inverter			
	Quantity		2			
	Oil type		FVC68D			
	Start-up method		Soft start			
Fan	Type		Propeller			
	Motor type		DC			
	Quantity		2			
	Motor output	kW	0.56×2	0.92×2	0.92×2	0.92×2
	Static pressure	Pa	0-20 (default); 20-80 (customized)			
	Airflow rate	m3/h	21500	29000	28000	28000
	Drive type		Direct			
Refrigerant	Type		R410A			
	Factory charge	kg	11.96	11.96	11.96	11.96
Pipe connections <sup>3</sup>	Liquid pipe	mm	Φ15.9	Φ22.2	Φ22.2	Φ22.2
	Gas pipe	mm	Φ28.6	Φ31.8	Φ34.9	Φ34.9
Sound pressure level <sup>4</sup>		dB(A)	67	68	68	68
Sound power level <sup>4</sup>		dB(A)	92	93	93	93
Net dimensions (W×H×D)		mm	1340×1760×825	1880×1760×825		
Packed dimensions (W×H×D)		mm	1405×1945×890	1945×1945×890		
Net weight		kg	315	366	396	396
Gross weight		kg	335	396	426	426
Ambient temp. operation range	Cooling	°C	-15 to 55	-15 to 55	-15 to 55	-15 to 55
	Heating	°C	-30 to 30	-30 to 30	-30 to 30	-30 to 30

Notes:

- Indoor air temperature 27°C DB, 19°C WB; outdoor air temperature 35°C DB; equivalent refrigerant piping length 5m with zero level difference.
- Indoor air temperature 20°C DB; outdoor air temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 5m with zero level difference.
- Diameters given are those of the unit's stop valve.
- Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.



**32-38HP**

Table 2-1.4: 32-38HP specifications

HP			32	34	36	38
Model			MDVO-V8900V2R1B(ECO)	MDVO-V8960V2R1B(ECO)	MDVO-V81010V2R1B(ECO)	MDVO-V81070V2R1B(ECO)
Combination type			-	14HP+20HP	16HP+20HP	14HP+24HP
Power supply			380-415V, 3N~, 50Hz			
Cooling1	Capacity	kW	90.0	96.0	101.0	107.0
		kBtu/h	306.9	327.4	344.4	364.9
	Power input	kW	43.9	43.1	48.0	49.7
	EER			2.05	2.23	2.10
Heating2(Rated)	Capacity	kW	90.0	96.0	101.0	107.0
		kBtu/h	306.9	327.4	344.4	364.9
	Power input	kW	29.9	28.8	31.2	31.8
	COP			3.01	3.33	3.24
Heating2(Max)	Capacity	kW	100.0	108.0	113.0	120.0
		kBtu/h	341.0	368.3	385.3	409.2
	Power input	kW	35.1	35.2	37.8	38.6
	COP			2.85	3.07	2.99
SEER			5.63	6.04	5.96	5.99
ηs,c			222.2%	238.6%	235.4%	236.6%
SCOP			3.83	3.99	3.96	4.02
ηs,h			150.2%	156.6%	155.4%	157.8%
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity			
	Maximum quantity		53	56	59	62
Compressor	Type		DC inverter			
	Quantity		2	3		
	Oil type		FVC68D			
	Start-up method		Soft start			
Fan	Type		Propeller			
	Motor type		DC			
	Quantity		2	3		
	Motor output	kW	0.92×2	0.56×2+0.92	0.56×2+0.92	0.56×2+0.92
	Static pressure	Pa	0-20 (default); 20-80 (customized)			
	Airflow rate	m3/h	28000	37600	37600	37100
	Drive type		Direct			
	Type		R410A			
Refrigerant	Factory charge	kg	11.96	8.4+9.3	8.4+9.3	8.4+11.96
Pipe connections <sup>3</sup>	Liquid pipe	mm	Φ22.2	Φ19.1	Φ19.1	Φ19.1
	Gas pipe	mm	Φ34.9	Φ31.8	Φ38.1	Φ38.1
Sound pressure level <sup>4</sup>		dB(A)	68	69	69	69
Sound power level <sup>4</sup>		dB(A)	93	93	91	93
Net dimensions (W×H×D)		mm	1880×1760×825	(940×1760×825)+(1340×1760×825)		
Packed dimensions (W×H×D)		mm	1945×1945×890	(1005×1945×890)+(1405×1945×890)		
Net weight		kg	396	215+295	215+295	215+315
Gross weight		kg	426	232+315	232+315	232+335
Ambient temp. operation range	Cooling	°C	-15 to 55	-15 to 55	-15 to 55	-15 to 55
	Heating	°C	-30 to 30	-30 to 30	-30 to 30	-30 to 30

## Notes:

- Indoor air temperature 27°C DB, 19°C WB; outdoor air temperature 35°C DB; equivalent refrigerant piping length 5m with zero level difference.
- Indoor air temperature 20°C DB; outdoor air temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 5m with zero level difference.
- Diameters given are those for the pipe connecting the outdoor unit combination to the first indoor branch joint for systems with total equivalent liquid piping lengths of less than 90m. For systems with total equivalent liquid piping lengths of 90m or longer, please refer to Part 3 "System Design and Installation" for connection piping diameters.
- Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.

# MDV8 ECO VRF 50Hz



## 40-46HP

Table 2-1.5: 40-46HP specifications

HP			40	42	44	46	
Model			MDVO-V81120V2R1B(ECO)	MDVO-V81170V2R1B(ECO)	MDVO-V81230V2R1B(ECO)	MDVO-V81285V2R1B(ECO)	
Combination type			<b>16HP+24HP</b>	<b>18HP+24HP</b>	<b>22HP+22HP</b>	<b>22HP+24HP</b>	
Power supply			380-415V, 3N~, 50Hz				
Cooling1	Capacity	kW	112.0	117.0	123.0	128.5	
		kBtu/h	381.9	399.0	419.4	438.2	
	Power input	kW	54.6	53.1	55.4	60.4	
	EER		2.05	2.20	2.22	2.13	
Heating2(Rated)	Capacity	kW	112.0	117.0	123.0	128.5	
		kBtu/h	381.9	399.0	419.4	438.2	
	Power input	kW	34.3	35.3	36.7	38.6	
	COP		3.27	3.31	3.35	3.33	
Heating2(Max)	Capacity	kW	125.0	131.0	138.0	144.0	
		kBtu/h	426.3	446.7	470.6	491.0	
	Power input	kW	41.2	42.3	43.9	46.2	
	COP		3.03	3.10	3.14	3.12	
SEER			5.93	5.92	5.85	5.87	
ηs,c			234.2%	233.8%	231%	231.8%	
SCOP			4.01	4.01	4.13	4.05	
ηs,h			157.4%	157.4%	162.2%	159%	
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity				
	Maximum quantity		64				
Compressor	Type		DC inverter				
	Quantity		3	4	4	4	
	Oil type		FVC68D				
	Start-up method		Soft start				
	Type		Propeller				
Fan	Motor type		DC				
	Quantity		3	4	4	4	
	Motor output	kW	0.56×2+0.92	0.56×4	0.56×4	0.56×4	
	Static pressure	Pa	0-20 (default); 20-80 (customized)				
	Airflow rate	m3/h	37100	43500	43000	43000	
	Drive type		Direct				
	Type		R410A				
Refrigerant	Factory charge	kg	8.4+11.96	9.3+11.96	11.96×2	11.96×2	
	Liquid pipe		mm	Φ19.1	Φ19.1	Φ19.1	Φ19.1
Pipe connections <sup>3</sup>	Gas pipe		mm	Φ38.1	Φ38.1	Φ38.1	Φ38.1
	Sound pressure level <sup>4</sup>		dB(A)	69	69	69	70
Sound power level <sup>4</sup>		dB(A)	93	94	92	94	
Net dimensions (W×H×D)		mm	(940×1760×825)+(1340×1760×825)	(1340×1760×825)×2			
Packed dimensions (W×H×D)		mm	(1005×1945×890)+(1405×1945×890)	(1405×1945×890)×2			
Net weight		kg	215+315	295+315	315×2	315×2	
Gross weight		kg	232+335	315+335	335×2	335×2	
Ambient temp. operation range	Cooling	°C	-15 to 55	-15 to 55	-15 to 55	-15 to 55	
	Heating	°C	-30 to 30	-30 to 30	-30 to 30	-30 to 30	

Notes:

- Indoor air temperature 27°C DB, 19°C WB; outdoor air temperature 35°C DB; equivalent refrigerant piping length 5m with zero level difference.
- Indoor air temperature 20°C DB; outdoor air temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 5m with zero level difference.
- Diameters given are those for the pipe connecting the outdoor unit combination to the first indoor branch joint for systems with total equivalent liquid piping lengths of less than 90m. For systems with total equivalent liquid piping lengths of 90m or longer, please refer to Part 3 "System Design and Installation" for connection piping diameters.
- Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.

Table 2-1.6: 48-54HP specifications

HP			48	50	52	54
Model			MDVO-V81340V2R1B(ECO)	MDVO-V81400V2R1B(ECO)	MDVO-V81460V2R1B(ECO)	MDVO-V81515V2R1B(ECO)
Combination type			<b>24HP+24HP</b>	<b>18HP+32HP</b>	<b>20HP+32HP</b>	<b>22HP+32HP</b>
Power supply			380-415V, 3N~, 50Hz			
Cooling1	Capacity	kW	134.0	140.0	146.0	151.5
		kBtu/h	456.9	477.4	497.9	516.6
	Power input	kW	65.4	64.3	69.9	71.6
	EER			2.05	2.18	2.09
Heating2(Rated)	Capacity	kW	134.0	140.0	146.0	151.5
		kBtu/h	456.9	477.4	497.9	516.6
	Power input	kW	40.5	45.0	47.1	48.3
	COP			3.31	3.11	3.10
Heating2(Max)	Capacity	kW	150.0	156.0	163.0	169.0
		kBtu/h	511.5	532.0	555.8	576.3
	Power input	kW	48.5	53.2	55.9	57.1
	COP			3.09	2.93	2.92
SEER			5.88	5.77	5.77	5.72
ηs,c			232.2%	227.8%	227.8%	225.8%
SCOP			3.98	3.90	3.87	3.95
ηs,h			156.2%	153%	151.8%	155%
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity			
	Maximum quantity		64			
Compressor	Type		DC inverter			
	Quantity		4			
	Oil type		FVC68D			
	Start-up method		Soft start			
Fan	Type		Propeller			
	Motor type		DC			
	Quantity		4			
	Motor output	kW	0.56×4	0.56×2+0.92×2	0.56×2+0.92×2	0.56×2+0.92×2
	Static pressure	Pa	0-20 (default); 20-80 (customized)			
	Airflow rate	m3/h	43000	50000	50000	49500
	Drive type		Direct			
Refrigerant	Type		R410A			
	Factory charge	kg	11.96×2	9.3+11.96	9.3+11.96	11.96×2
Pipe connections <sup>3</sup>	Liquid pipe	mm	Φ19.1	Φ19.1	Φ19.1	Φ19.1
	Gas pipe	mm	Φ38.1	Φ38.1	Φ38.1	Φ38.1
Sound pressure level <sup>4</sup>		dB(A)	70	70	70	70
Sound power level <sup>4</sup>		dB(A)	95	94	95	95
Net dimensions (W×H×D)		mm	(1340×1760×825)×2	(1340×1760×825)+(1880×1760×825)		
Packed dimensions (W×H×D)		mm	(1405×1945×890)×2	(1405×1945×890)+(1945×1945×890)		
Net weight		kg	315×2	295+396	295+396	315+396
Gross weight		kg	335×2	315+426	315+426	335+426
Ambient temp. operation range	Cooling	°C	-15 to 55	-15 to 55	-15 to 55	-15 to 55
	Heating	°C	-30 to 30	-30 to 30	-30 to 30	-30 to 30

**Notes:**

- Indoor air temperature 27°C DB, 19°C WB; outdoor air temperature 35°C DB; equivalent refrigerant piping length 5m with zero level difference.
- Indoor air temperature 20°C DB; outdoor air temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 5m with zero level difference.
- Diameters given are those for the pipe connecting the outdoor unit combination to the first indoor branch joint for systems with total equivalent liquid piping lengths of less than 90m. For systems with total equivalent liquid piping lengths of 90m or longer, please refer to Part 3 "System Design and Installation" for connection piping diameters.
- Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.

Table 2-1.7: 56-62HP specifications

HP			56	58	60	62
Model			MDVO-V81570V2R1B(ECO)	MDVO-V81630V2R1B(ECO)	MDVO-V81685V2R1B(ECO)	MDVO-V81750V2R1B(ECO)
Combination type			<b>24HP+32HP</b>	<b>26HP+32HP</b>	<b>28HP+32HP</b>	<b>30HP+32HP</b>
Power supply			380-415V, 3N~, 50Hz			
Cooling1	Capacity	kW	157.0	163.0	168.5	175.0
		kBtu/h	535.4	555.8	574.6	596.8
	Power input	kW	76.6	82.1	76.3	81.7
	EER			2.05	1.99	2.21
Heating2(Rated)	Capacity	kW	157.0	163.0	168.5	175.0
		kBtu/h	535.4	555.8	574.6	596.8
	Power input	kW	50.1	53.1	54.4	57.2
	COP			3.13	3.07	3.10
Heating2(Max)	Capacity	kW	175.0	181.5	187.5	195.0
		kBtu/h	596.8	618.9	639.4	665.0
	Power input	kW	59.4	63.1	65.0	67.7
	COP			2.95	2.88	2.88
SEER			5.74	5.62	5.72	5.66
ηs,c			226.6%	221.8%	225.8%	223.4%
SCOP			3.90	3.93	3.92	3.86
ηs,h			153%	154.2%	153.8%	151.4%
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity			
	Maximum quantity		64			
Compressor	Type		DC inverter			
	Quantity		4			
	Oil type		FVC68D			
	Start-up method		Soft start			
Fan	Type		Propeller			
	Motor type		DC			
	Quantity		4			
	Motor output	kW	0.56×2+0.92×2	0.92×4	0.92×4	0.92×4
	Static pressure	Pa	0-20 (default); 20-80 (customized)			
	Airflow rate	m3/h	49500	57000	56000	56000
	Drive type		Direct			
Refrigerant	Type		R410A			
	Factory charge	kg	11.96×2	11.96×2	11.96×2	11.96×2
Pipe connections3	Liquid pipe	mm	Φ19.1	Φ19.1	Φ19.1	Φ19.1
	Gas pipe	mm	Φ41.3	Φ41.3	Φ41.3	Φ41.3
Sound pressure level4		dB(A)	71	71	71	71
Sound power level4		dB(A)	96	96	96	96
Net dimensions (W×H×D)		mm	(1340×1760×825)+(1880×1760×825)	(1880×1760×825)×2		
Packed dimensions (W×H×D)		mm	(1405×1945×890)+(1945×1945×890)	(1945×1945×890)×2		
Net weight		kg	315+396	366+396	396×2	396×2
Gross weight		kg	335+426	396+426	426×2	426×2
Ambient temp. operation range	Cooling	°C	-15 to 55	-15 to 55	-15 to 55	-15 to 55
	Heating	°C	-30 to 30	-30 to 30	-30 to 30	-30 to 30

Notes:

- Indoor air temperature 27°C DB, 19°C WB; outdoor air temperature 35°C DB; equivalent refrigerant piping length 5m with zero level difference.
- Indoor air temperature 20°C DB; outdoor air temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 5m with zero level difference.
- Diameters given are those for the pipe connecting the outdoor unit combination to the first indoor branch joint for systems with total equivalent liquid piping lengths of less than 90m. For systems with total equivalent liquid piping lengths of 90m or longer, please refer to Part 3 "System Design and Installation" for connection piping diameters.
- Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.

**64-70HP**

Table 2-1.8: 64-70HP specifications

HP			64	66	68	70
Model			MDVO-V81800V2R1B(ECO)	MDVO-V81860V2R1B(ECO)	MDVO-V81910V2R1B(ECO)	MDVO-V81970V2R1B(ECO)
Combination type			<b>32HP+32HP</b>	<b>14HP+20HP+32HP</b>	<b>16HP+20HP+32HP</b>	<b>14HP+24HP+32HP</b>
Power supply			380-415V, 3N~, 50Hz			
Cooling1	Capacity	kW	180.0	186.0	191.0	197.0
		kBtu/h	613.8	634.3	651.3	671.8
	Power input	kW	87.8	87.0	91.9	93.6
	EER			2.05	2.14	2.08
Heating2(Rated)	Capacity	kW	180.0	186.0	191.0	197.0
		kBtu/h	613.8	634.3	651.3	671.8
	Power input	kW	59.8	58.7	61.1	61.7
	COP			3.01	3.17	3.13
Heating2(Max)	Capacity	kW	200.0	208.0	213.0	220.0
		kBtu/h	682.0	709.3	726.3	750.2
	Power input	kW	70.2	70.3	72.9	73.7
	COP			2.85	2.96	2.92
SEER			5.63	5.85	5.83	5.82
ηs,c			222.2%	231%	230.2%	229.8%
SCOP			3.83	3.91	3.90	3.93
ηs,h			150.2%	153.4%	153%	154.2%
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity			
	Maximum quantity		64			
Compressor	Type		DC inverter			
	Quantity		4	5	5	5
	Oil type		FVC68D			
	Start-up method		Soft start			
Fan	Type		Propeller			
	Motor type		DC			
	Quantity		4	5	5	5
	Motor output	kW	0.92×4	0.56×2+0.92×3	0.56×2+0.92×3	0.56×2+0.92×3
	Static pressure	Pa	0-20 (default); 20-80 (customized)			
	Airflow rate	m3/h	56000	65600	65600	65100
	Drive type		Direct			
Refrigerant	Type		R410A			
	Factory charge	kg	11.96×2	8.4+9.3+11.96	8.4+9.3+11.96	8.4+11.96×2
Pipe connections3	Liquid pipe	mm	Φ19.1	Φ19.1	Φ22.2	Φ22.2
	Gas pipe	mm	Φ41.3	Φ41.3	Φ44.5	Φ44.5
Sound pressure level4		dB(A)	71	71	72	72
Sound power level4		dB(A)	96	95	95	96
Net dimensions (W×H×D)		mm	(1880×1760×825)×2	(940×1760×825)+(1340×1760×825)+(1880×1760×825)		
Packed dimensions (W×H×D)		mm	(1945×1945×890)×2	(1005×1945×890)+(1405×1945×890)+(1945×1945×890)		
Net weight		kg	396×2	215+295+396	215+295+396	215+315+396
Gross weight		kg	426×2	232+315+426	232+315+426	232+335+426
Ambient temp. operation range	Cooling	°C	-15 to 55	-15 to 55	-15 to 55	-15 to 55
	Heating	°C	-30 to 30	-30 to 30	-30 to 30	-30 to 30

## Notes:

- Indoor air temperature 27°C DB, 19°C WB; outdoor air temperature 35°C DB; equivalent refrigerant piping length 5m with zero level difference.
- Indoor air temperature 20°C DB; outdoor air temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 5m with zero level difference.
- Diameters given are those for the pipe connecting the outdoor unit combination to the first indoor branch joint for systems with total equivalent liquid piping lengths of less than 90m. For systems with total equivalent liquid piping lengths of 90m or longer, please refer to Part 3 "System Design and Installation" for connection piping diameters.
- Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.

Table 2-1.9: 72-74HP specifications

HP			72	74
Model			MDVO-V82020V2R1B(ECO)	MDVO-V82070V2R1B(ECO)
Combination type			<b>16HP+24HP+32HP</b>	<b>18HP+24HP+32HP</b>
Power supply			380-415V, 3N~, 50Hz	
Cooling1	Capacity	kW	202.0	207.0
		kBtu/h	688.8	705.9
	Power input	kW	98.5	97.0
	EER		2.05	2.13
Heating2(Rated)	Capacity	kW	202.0	207.0
		kBtu/h	688.8	705.9
	Power input	kW	64.2	65.2
	COP		3.15	3.17
Heating2(Max)	Capacity	kW	225.0	231.0
		kBtu/h	767.3	787.7
	Power input	kW	76.3	77.4
	COP		2.95	2.98
SEER			5.80	5.79
ηs,c			229%	228.6%
SCOP			3.93	3.93
ηs,h			154.2%	154.2%
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity	
	Maximum quantity		64	
Compressor	Type		DC inverter	
	Quantity		5	6
	Oil type		FVC68D	
	Start-up method		Soft start	
	Type		Propeller	
Fan	Motor type		DC	
	Quantity		5	6
	Motor output	kW	0.56×2+0.92×3	0.56×4+0.92×2
	Static pressure	Pa	0-20 (default); 20-80 (customized)	
	Airflow rate	m3/h	65100	71500
	Drive type		Direct	
	Type		R410A	
Refrigerant	Factory charge	kg	8.4+11.96×2	9.3+11.96×2
	Type		R410A	
Pipe connections3	Liquid pipe	mm	Φ22.2	Φ22.2
	Gas pipe	mm	Φ44.5	Φ44.5
Sound pressure level4		dB(A)	72	72
Sound power level4		dB(A)	96	96
Net dimensions (W×H×D)		mm	(940×1760×825)+(1340×1760×825)+(1880×1760×825)	(1340×1760×825)×2+(1880×1760×825)
Packed dimensions (W×H×D)		mm	(1005×1945×890)+(1405×1945×890)+(1945×1945×890)	(1405×1945×890)×2+(1945×1945×890)
Net weight		kg	215+315+396	295+315+396
Gross weight		kg	232+335+426	315+335+426
Ambient temp. operation range	Cooling	°C	-15 to 55	-15 to 55
	Heating	°C	-30 to 30	-30 to 30

Notes:

- Indoor air temperature 27°C DB, 19°C WB; outdoor air temperature 35°C DB; equivalent refrigerant piping length 5m with zero level difference.
- Indoor air temperature 20°C DB; outdoor air temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 5m with zero level difference.
- Diameters given are those for the pipe connecting the outdoor unit combination to the first indoor branch joint for systems with total equivalent liquid piping lengths of less than 90m. For systems with total equivalent liquid piping lengths of 90m or longer, please refer to Part 3 "System Design and Installation" for connection piping diameters.
- Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.

Table 2-1.10: 76-80HP specifications

HP			76	78	80
Model			MDVO-V82130V2R1B(ECO)	MDVO-V82185V2R1B(ECO)	MDVO-V82240V2R1B(ECO)
Combination type			<b>22HP+22HP+32HP</b>	<b>22HP+24HP+32HP</b>	<b>24HP+24HP+32HP</b>
Power supply			380-415V, 3N~, 50Hz		
Cooling1	Capacity	kW	213.0	218.5	224.0
		kBtu/h	726.3	745.1	763.8
	Power input	kW	99.3	104.3	109.3
	EER		2.15	2.09	2.05
Heating2(Rated)	Capacity	kW	213.0	218.5	224.0
		kBtu/h	726.3	745.1	763.8
	Power input	kW	66.6	68.5	70.4
	COP		3.20	3.19	3.18
Heating2(Max)	Capacity	kW	238.0	244.0	250.0
		kBtu/h	811.6	832.0	852.5
	Power input	kW	79.0	81.3	83.6
	COP		3.01	3.00	2.99
SEER			5.76	5.77	5.78
ηs,c			227.4%	227.8%	228.2%
SCOP			4.00	3.96	3.92
ηs,h			157%	155.4%	153.8%
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity		
	Maximum quantity		64		
Compressor	Type		DC inverter		
	Quantity		6	6	6
	Oil type		FVC68D		
	Start-up method		Soft start		
Fan	Type		Propeller		
	Motor type		DC		
	Quantity		6	6	6
	Motor output	kW	0.56×4+0.92×2	0.56×4+0.92×2	0.56×4+0.92×2
	Static pressure	Pa	0-20 (default); 20-80 (customized)		
	Airflow rate	m <sup>3</sup> /h	71000	71000	71000
	Drive type		Direct		
Refrigerant	Type		R410A		
	Factory charge	kg	11.96×3	11.96×3	11.96×3
Pipe connections <sup>3</sup>	Liquid pipe	mm	Φ22.2	Φ22.2	Φ22.2
	Gas pipe	mm	Φ44.5	Φ44.5	Φ44.5
Sound pressure level <sup>4</sup>		dB(A)	72	72	72
Sound power level <sup>4</sup>		dB(A)	96	96	97
Net dimensions (W×H×D)		mm	(1340×1760×825)×2+(1880×1760×825)		
Packed dimensions (W×H×D)		mm	(1405×1945×890)×2+(1945×1945×890)		
Net weight		kg	315×2+396	315×2+396	315×2+396
Gross weight		kg	335×2+426	335×2+426	335×2+426
Ambient temp. operation range	Cooling	°C	-15 to 55	-15 to 55	-15 to 55
	Heating	°C	-30 to 30	-30 to 30	-30 to 30

**Notes:**

- Indoor air temperature 27°C DB, 19°C WB; outdoor air temperature 35°C DB; equivalent refrigerant piping length 5m with zero level difference.
- Indoor air temperature 20°C DB; outdoor air temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 5m with zero level difference.
- Diameters given are those for the pipe connecting the outdoor unit combination to the first indoor branch joint for systems with total equivalent liquid piping lengths of less than 90m. For systems with total equivalent liquid piping lengths of 90m or longer, please refer to Part 3 "System Design and Installation" for connection piping diameters.
- Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.

# MDV8 ECO VRF 50Hz



## 82-88HP

Table 2-1.11: 82-88HP specifications

HP			82	84	86	88
Model			MDVO-V82300V2R1B(ECO)	MDVO-V82360V2R1B(ECO)	MDVO-V82415V2R1B(ECO)	MDVO-V82470V2R1B(ECO)
Combination type			<b>18HP+32HP+32HP</b>	<b>20HP+32HP+32HP</b>	<b>22HP+32HP+32HP</b>	<b>24HP+32HP+32HP</b>
Power supply			380-415V, 3N~, 50Hz			
Cooling <sup>1</sup>	Capacity	kW	230.0	236.0	241.5	247.0
		kBtu/h	784.3	804.8	823.5	842.3
	Power input	kW	108.2	113.9	115.5	120.5
	EER			2.13	2.07	2.09
Heating <sup>2</sup> (Rated)	Capacity	kW	230.0	236.0	241.5	247.0
		kBtu/h	784.3	804.8	823.5	842.3
	Power input	kW	74.9	77.0	78.2	80.0
	COP			3.07	3.06	3.09
Heating <sup>2</sup> (Max)	Capacity	kW	256.0	263.0	269.0	275.0
		kBtu/h	873.0	896.8	917.3	937.8
	Power input	kW	88.2	91.0	92.1	94.4
	COP			2.90	2.89	2.92
SEER			5.73	5.72	5.69	5.70
η <sub>s,c</sub>			226.2%	225.8%	224.6%	225%
SCOP			3.87	3.86	3.91	3.87
η <sub>s,h</sub>			151.8%	151.4%	153.4%	151.8%
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity			
	Maximum quantity		64			
Compressor	Type		DC inverter			
	Quantity		6	6	6	6
	Oil type		FVC68D			
	Start-up method		Soft start			
Fan	Type		Propeller			
	Motor type		DC			
	Quantity		6	6	6	6
	Motor output	kW	0.56×2+0.92×4	0.56×2+0.92×4	0.56×2+0.92×4	0.56×2+0.92×4
	Static pressure	Pa	0-20 (default); 20-80 (customized)			
	Airflow rate	m <sup>3</sup> /h	78000	78000	77500	77500
	Drive type		Direct			
Refrigerant	Type		R410A			
	Factory charge	kg	9.3+11.96×2	9.3+11.96×2	11.96×3	11.96×3
Pipe connections <sup>3</sup>	Liquid pipe	mm	Φ22.2	Φ25.4	Φ25.4	Φ25.4
	Gas pipe	mm	Φ44.5	Φ50.8	Φ50.8	Φ50.8
Sound pressure level <sup>4</sup>		dB(A)	72	72	72	72
Sound power level <sup>4</sup>		dB(A)	97	97	97	98
Net dimensions (W×H×D)		mm	(1340×1760×825)+(1880×1760×825)×2			
Packed dimensions (W×H×D)		mm	(1405×1945×890)+(1945×1945×890)×2			
Net weight		kg	295+396×2	295+396×2	315+396×2	315+396×2
Gross weight		kg	315+426×2	315+426×2	335+426×2	335+426×2
Ambient temp. operation range	Cooling	°C	-15 to 55	-15 to 55	-15 to 55	-15 to 55
	Heating	°C	-30 to 30	-30 to 30	-30 to 30	-30 to 30

Notes:

- Indoor air temperature 27°C DB, 19°C WB; outdoor air temperature 35°C DB; equivalent refrigerant piping length 5m with zero level difference.
- Indoor air temperature 20°C DB; outdoor air temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 5m with zero level difference.
- Diameters given are those for the pipe connecting the outdoor unit combination to the first indoor branch joint for systems with total equivalent liquid piping lengths of less than 90m. For systems with total equivalent liquid piping lengths of 90m or longer, please refer to Part 3 "System Design and Installation" for connection piping diameters.
- Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.



**90-96HP**

Table 2-1.12: 90-96HP specifications

HP			90	92	94	96
Model			MDVO-V82530V2R1B(ECO)	MDVO-V82585V2R1B(ECO)	MDVO-V82650V2R1B(ECO)	MDVO-V82700V2R1B(ECO)
Combination type			<b>26HP+32HP+32HP</b>	<b>28HP+32HP+32HP</b>	<b>30HP+32HP+32HP</b>	<b>32HP+32HP+32HP</b>
Power supply			380-415V, 3N~, 50Hz			
Cooling <sup>1</sup>	Capacity	kW	253.0	258.5	265.0	270.0
		kBtu/h	862.7	881.5	903.7	920.7
	Power input	kW	126.0	120.2	125.6	131.7
	EER			2.01	2.15	2.11
Heating <sup>2</sup> (Rated)	Capacity	kW	253.0	258.5	265.0	270.0
		kBtu/h	862.7	881.5	903.7	920.7
	Power input	kW	83.0	84.3	87.1	89.7
	COP			3.05	3.07	3.04
Heating <sup>2</sup> (Max)	Capacity	kW	281.5	287.5	295.0	300.0
		kBtu/h	959.9	980.4	1006.0	1023.0
	Power input	kW	98.2	100.0	102.8	105.3
	COP			2.87	2.88	2.87
SEER			5.63	5.69	5.65	5.63
η <sub>s,c</sub>			222.2%	224.6%	223%	222.2%
SCOP			3.90	3.89	3.85	3.83
η <sub>s,h</sub>			153%	152.6%	151%	150.2%
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity			
	Maximum quantity		64			
Compressor	Type		DC inverter			
	Quantity		6	6	6	6
	Oil type		FVC68D			
	Start-up method		Soft start			
Fan	Type		Propeller			
	Motor type		DC			
	Quantity		6	6	6	6
	Motor output	kW	0.92×6	0.92×6	0.92×6	0.92×6
	Static pressure	Pa	0-20 (default); 20-80 (customized)			
	Airflow rate	m <sup>3</sup> /h	85000	84000	84000	84000
	Drive type		Direct			
Refrigerant	Type		R410A			
	Factory charge	kg	11.96×3	11.96×3	11.96×3	11.96×3
Pipe connections <sup>3</sup>	Liquid pipe	mm	Φ25.4	Φ25.4	Φ25.4	Φ25.4
	Gas pipe	mm	Φ50.8	Φ50.8	Φ50.8	Φ50.8
Sound pressure level <sup>4</sup>		dB(A)	73	73	73	73
Sound power level <sup>4</sup>		dB(A)	98	98	98	98
Net dimensions (W×H×D)		mm	(1880×1760×825)×3			
Packed dimensions (W×H×D)		mm	(1945×1945×890)×3			
Net weight		kg	366+396×2	396×3	396×3	396×3
Gross weight		kg	396+426×2	426×3	426×3	426×3
Ambient temp. operation range	Cooling	°C	-15 to 55	-15 to 55	-15 to 55	-15 to 55
	Heating	°C	-30 to 30	-30 to 30	-30 to 30	-30 to 30

## Notes:

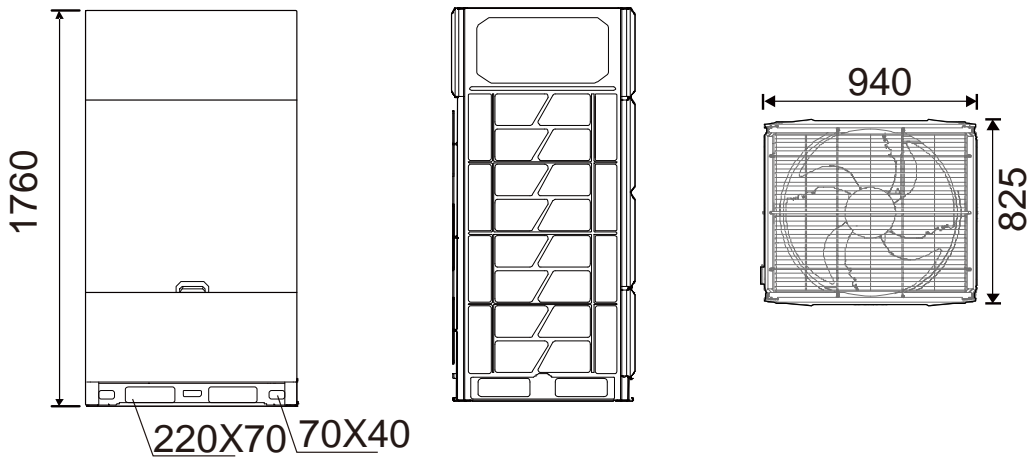
- Indoor air temperature 27°C DB, 19°C WB; outdoor air temperature 35°C DB; equivalent refrigerant piping length 5m with zero level difference.
- Indoor air temperature 20°C DB; outdoor air temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 5m with zero level difference.
- Diameters given are those for the pipe connecting the outdoor unit combination to the first indoor branch joint for systems with total equivalent liquid piping lengths of less than 90m. For systems with total equivalent liquid piping lengths of 90m or longer, please refer to Part 3 "System Design and Installation" for connection piping diameters.
- Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.

## 2 Dimensions

### 2.1 Single Units

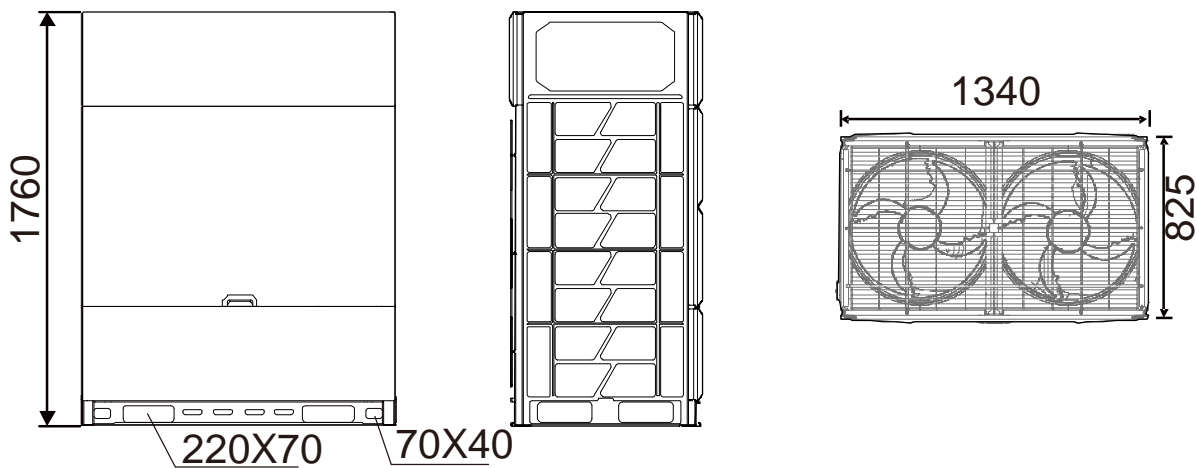
8/10/12/14/16 HP

Figure 2-2.1: 8/10/12/14/16 HP dimensions (unit: mm)



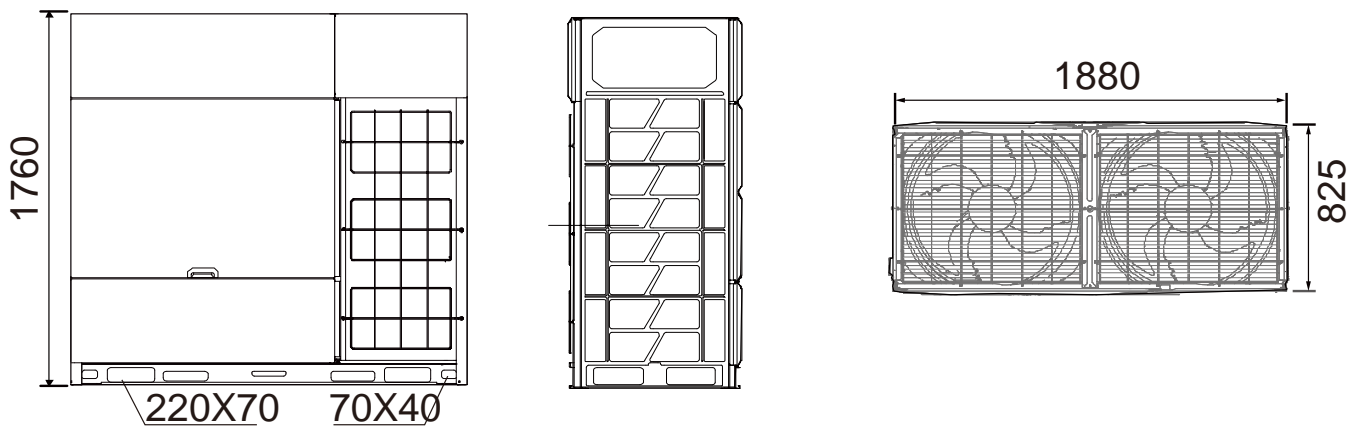
18/20/22/24HP

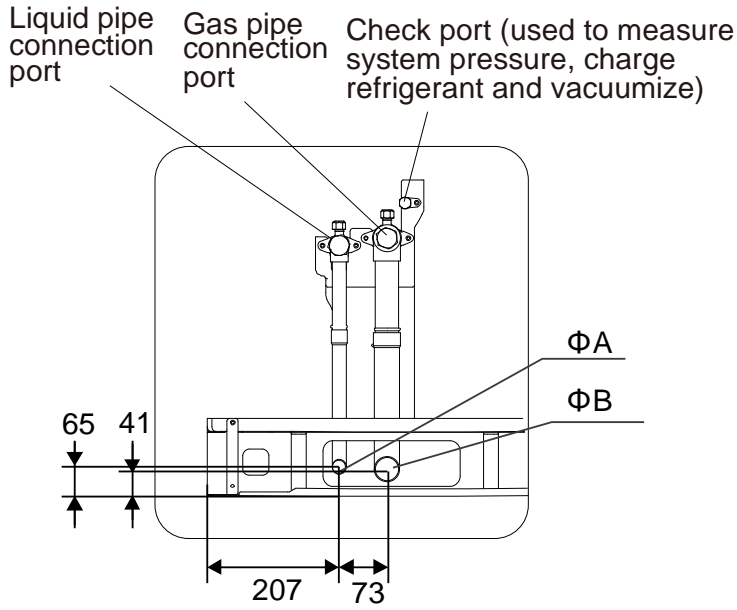
Figure 2-2.2: 18/20/22/24HP dimensions (unit: mm)



26/28/30/32HP

Figure 2-2.3: 26/28/30/32HP dimensions (unit: mm)



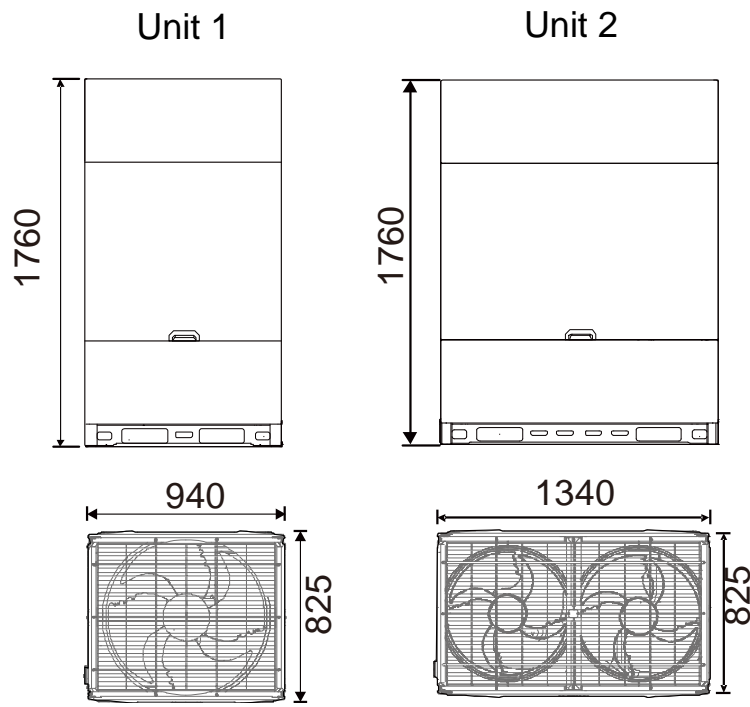
**Detail R**
*Figure 2-2.4: Detail R (unit: mm)*

*Table 2-2.1: Connection piping diameter (unit: mm)*

Size	ΦA(Liquid)	ΦB(Gas)
8HP	Φ12.7	Φ25.4
10HP	Φ12.7	Φ25.4
12HP	Φ12.7	Φ25.4
14HP	Φ15.9	Φ28.6
16HP	Φ15.9	Φ28.6
18HP	Φ19.1	Φ31.8
20HP	Φ19.1	Φ31.8
22HP	Φ19.1	Φ31.8
24HP	Φ19.1	Φ31.8
26HP	Φ22.2	Φ31.8
28HP	Φ22.2	Φ38.1
30HP	Φ22.2	Φ38.1
32HP	Φ22.2	Φ38.1

2.2 Combinations of Units

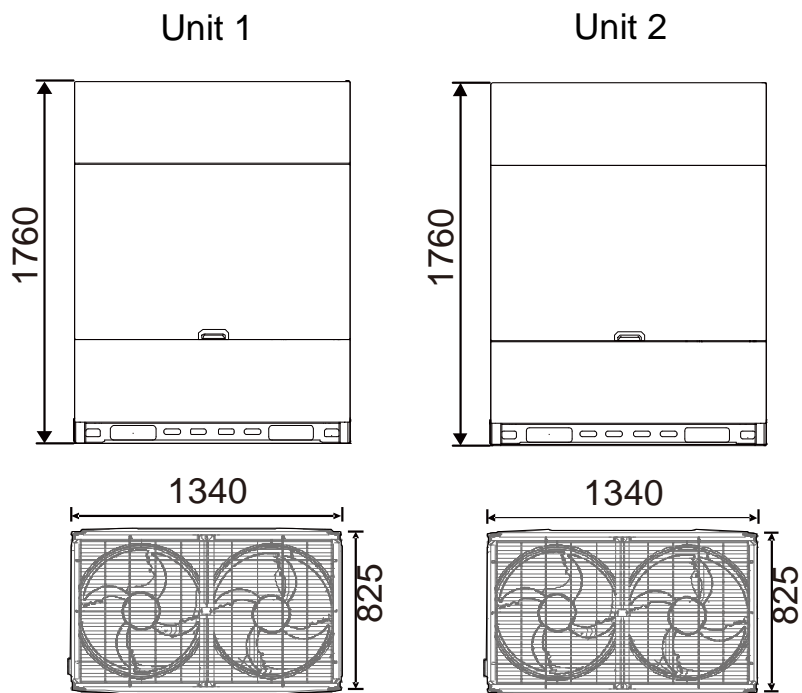
34/36/38/40HP

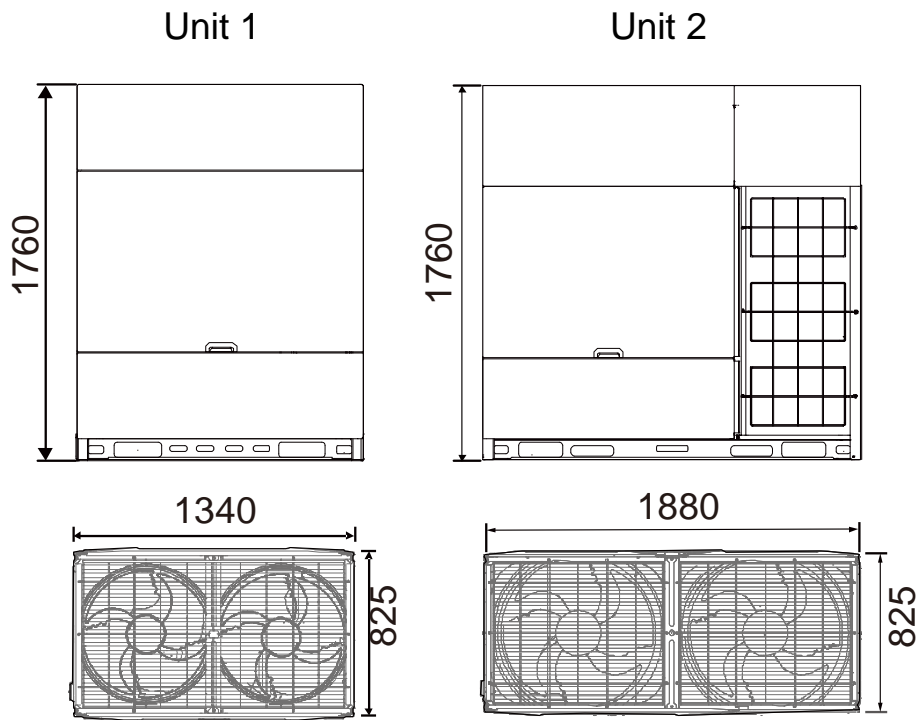
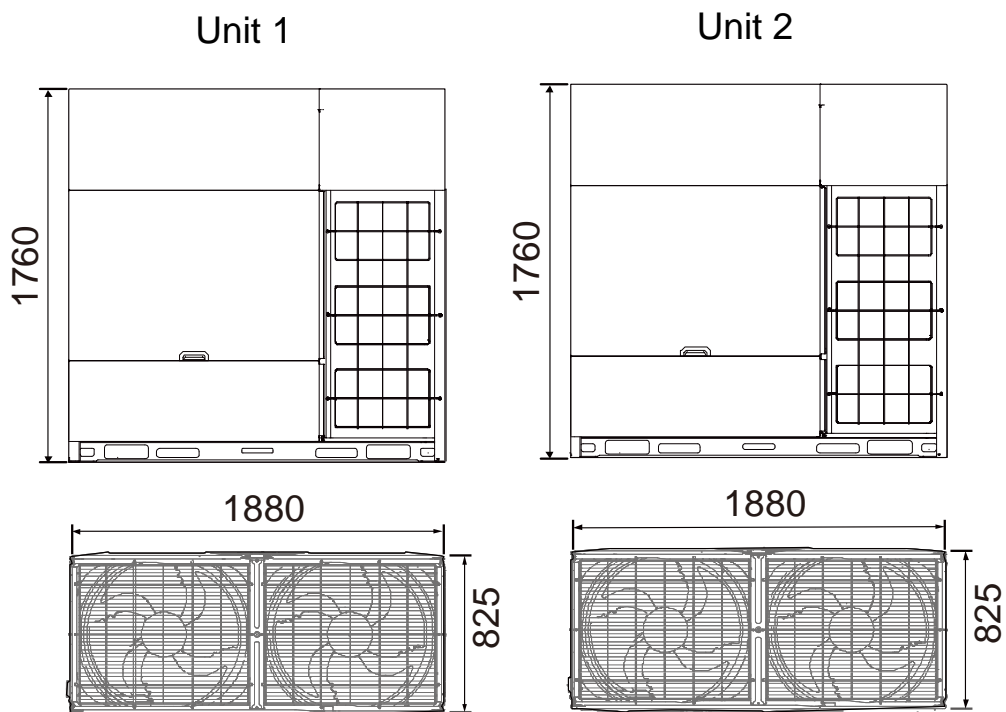
Figure 2-2.5: 34/36/38/40HP dimensions (unit: mm)



42/44/46/48HP

Figure 2-2.6: 42/44/46/48HP dimensions (unit: mm)



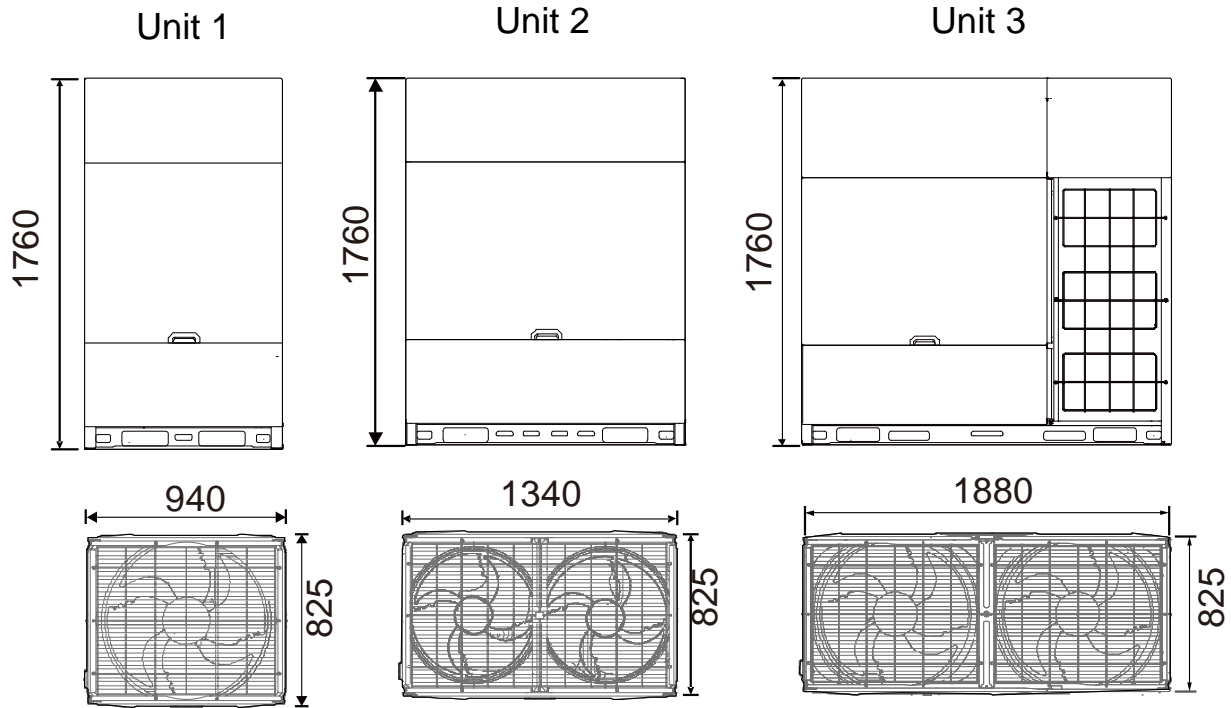
**50/52/54/56HP**
*Figure 2-2.7: 50/52/54/56HP dimensions (unit: mm)*

**58/60/62/64HP**
*Figure 2-2.8: 58/60/62/64HP dimensions (unit: mm)*


# MDV8 ECO VRF 50Hz



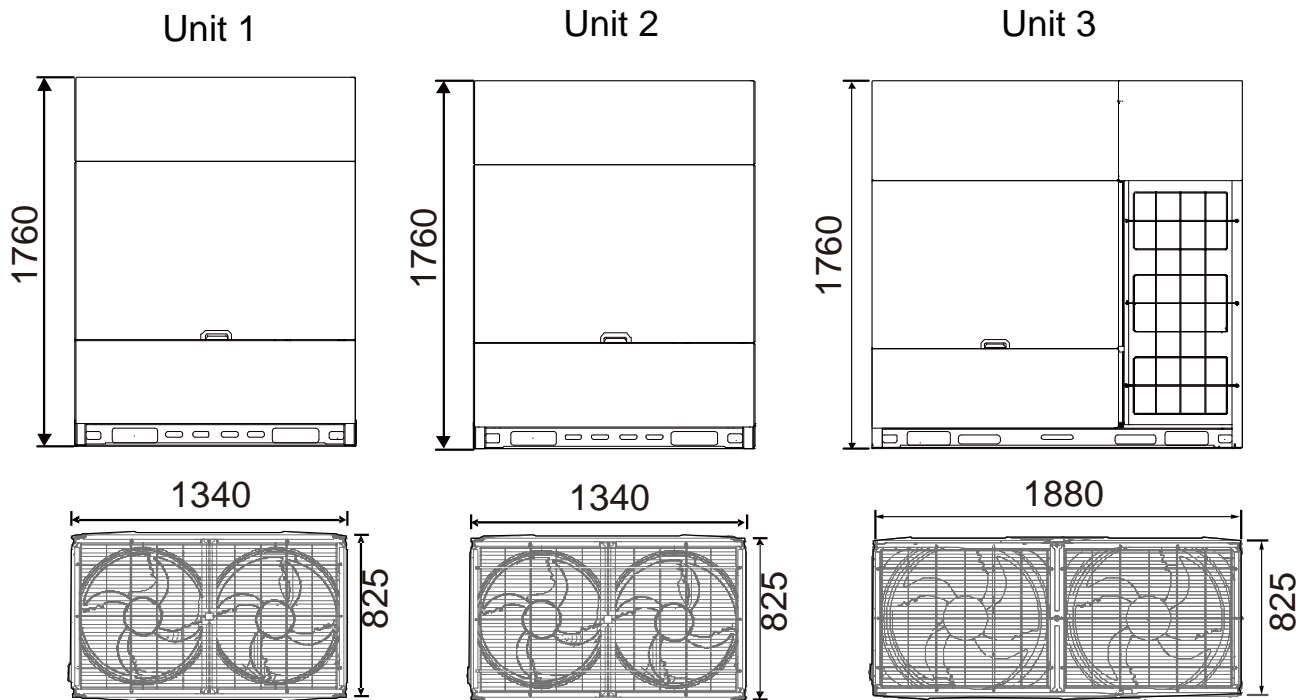
66/68/70/72HP

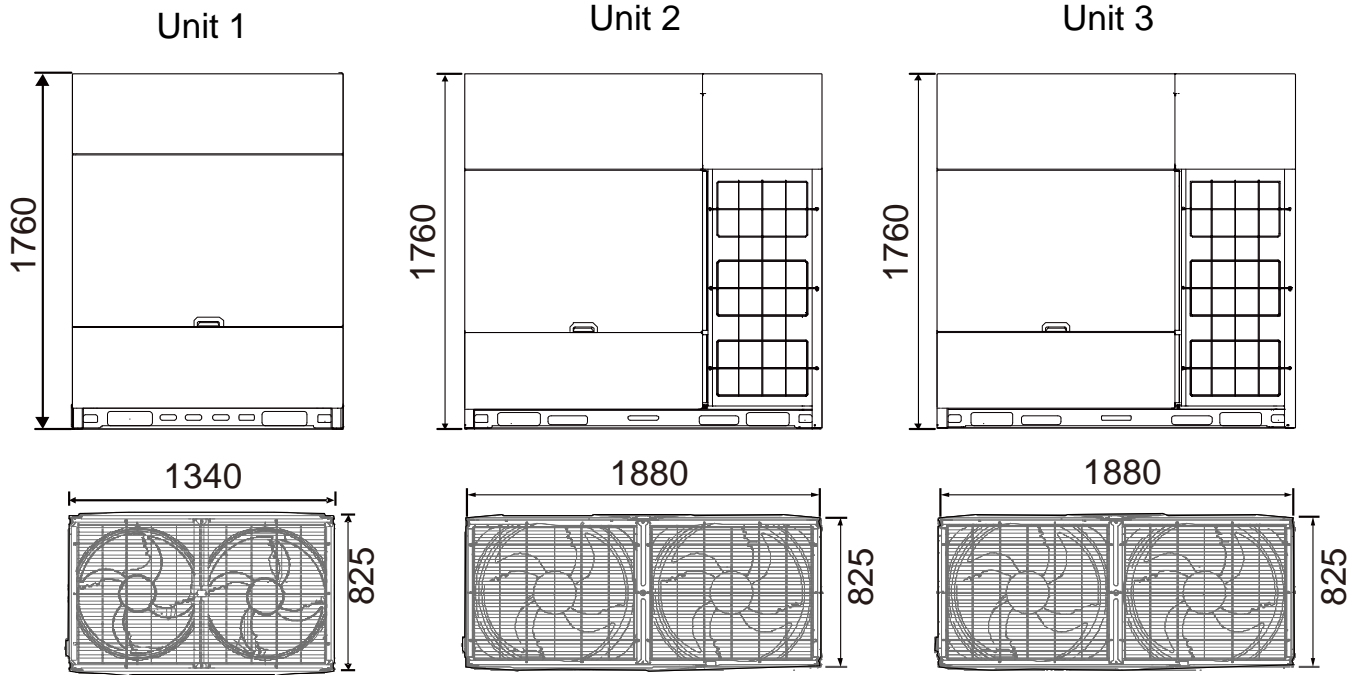
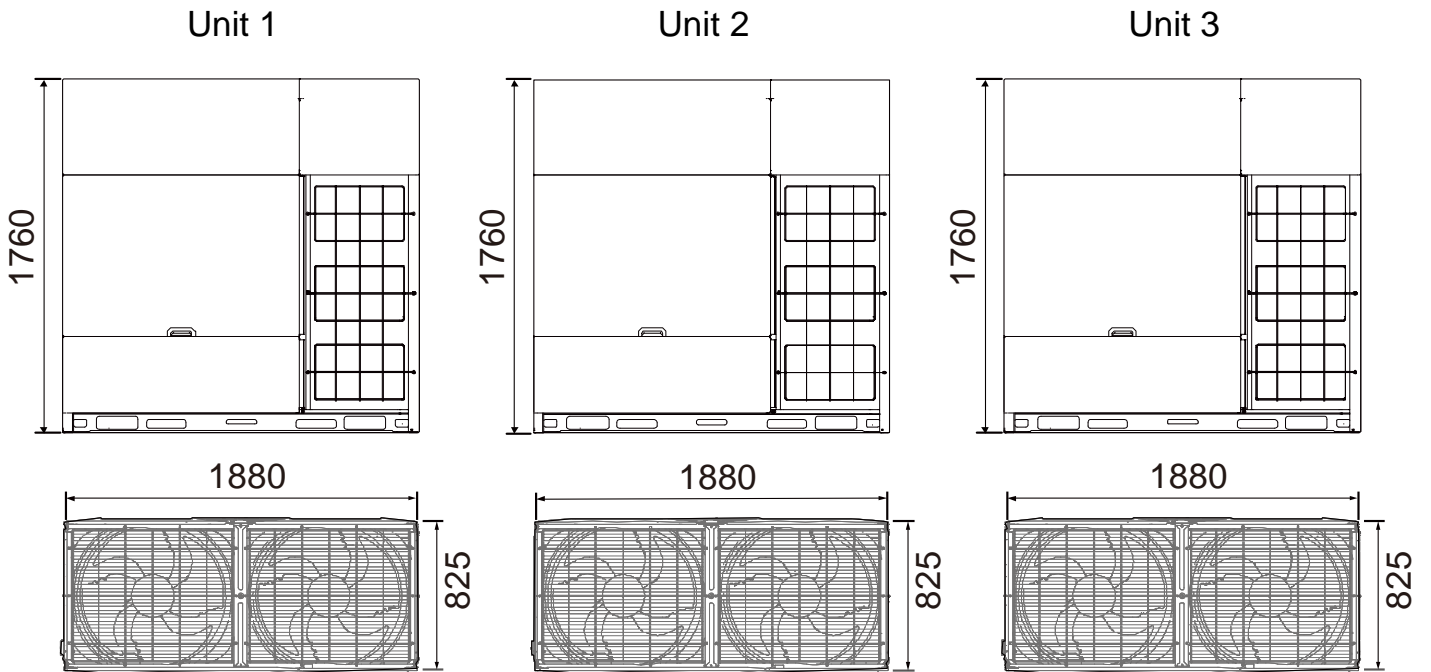
Figure 2-2.9: 66/68/70/72HP dimensions (unit: mm)



74/76/78/80HP

Figure 2-2.10: 74/76/78/80HP dimensions (unit: mm)



**82/84/86/88HP**
*Figure 2-2.11: 82/84/86/88HP dimensions (unit: mm)*

**90/92/94/96HP**
*Figure 2-2.12: 90/92/94/96HP dimensions (unit: mm)*


### 3 Installation Space Requirements

Make sure there is sufficient space around the unit for maintenance work, and the minimum space for air inlet and air outlet is reserved (see below to select a feasible method).

Ensure there is enough space for maintenance. The units in the same system must be placed at the same height.

Outdoor units must be spaced so that sufficient air may flow through each unit. Sufficient airflow across heat exchangers is essential for outdoor units to function properly.

#### For single unit installation

Figure 2-3.1: Single unit installation (unit: mm)

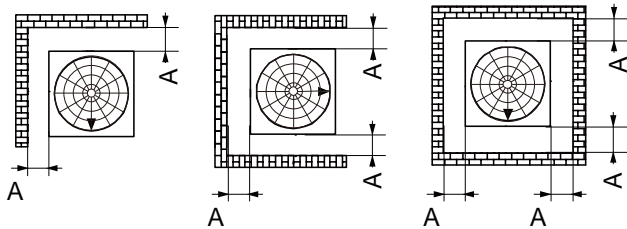
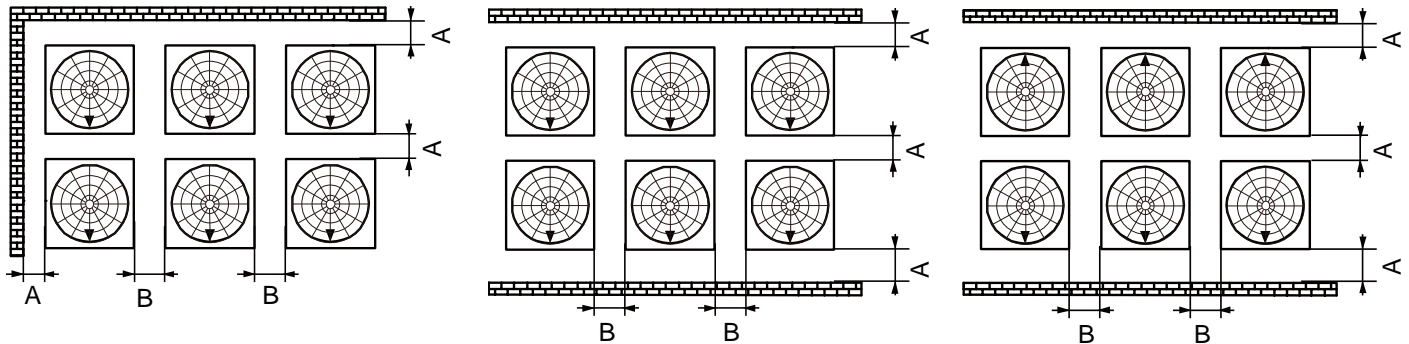


Table 2-3.1: significance of symbol

symbol	significance	Value
arrow ▼	the front of the unit	-
A	distance	$A \geq 1000\text{mm}$
B	distance	$500\text{mm} \geq B \geq 100\text{mm}$ .

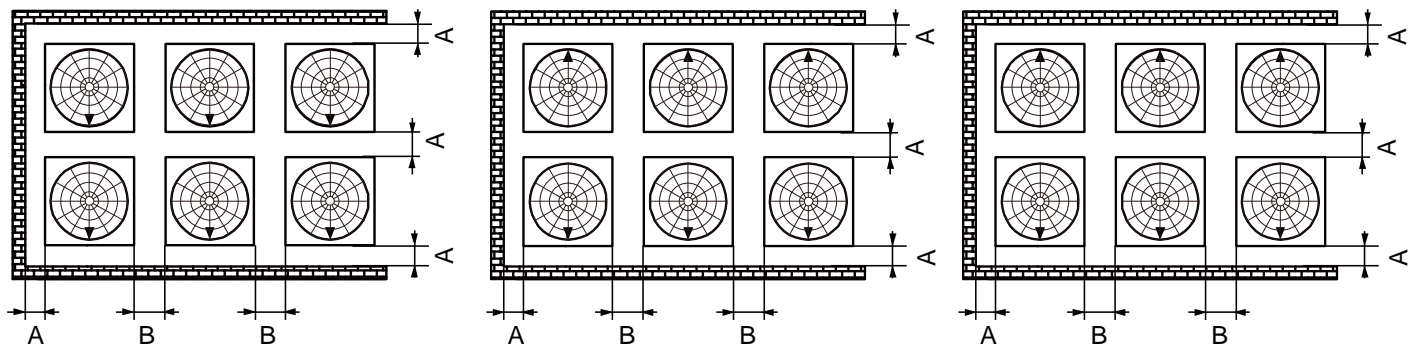
#### Installation with walls in two directions

Figure 2-3.2: installation with walls in two directions (unit: mm)



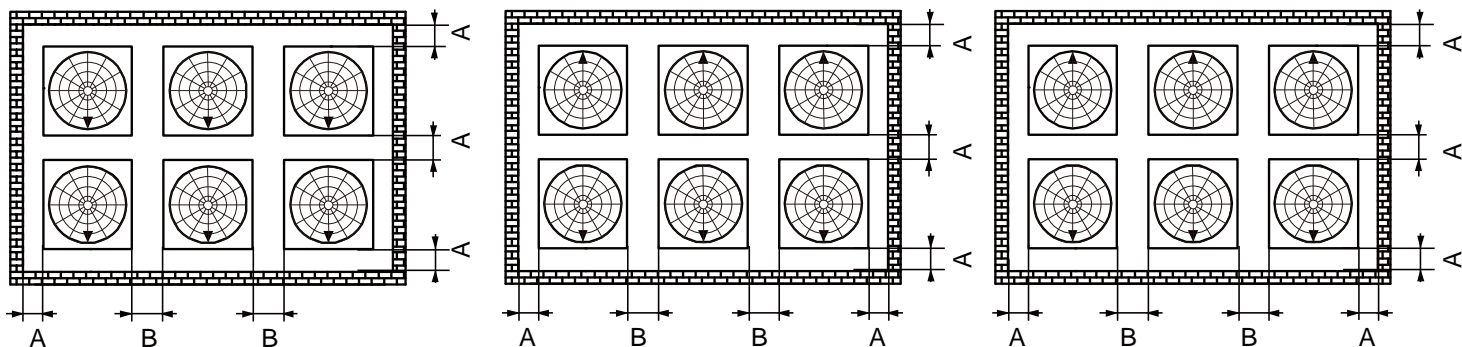
#### Installation with walls in three directions

Figure 2-3.3: installation with walls in three directions (unit: mm)



#### Installation with walls in four directions

Figure 2-3.4: installation with walls in four directions (unit: mm)





The dimensions in the above figures (Figure 2-3.1 to Figure 2-3.4) provide sufficient space for operation and maintenance under normal operating conditions (refrigeration mode at an outdoor temperature of 35°C).

If the outdoor temperature is higher and ventilation short circuiting may occur, choose the most suitable dimensions by calculating the return air flow.

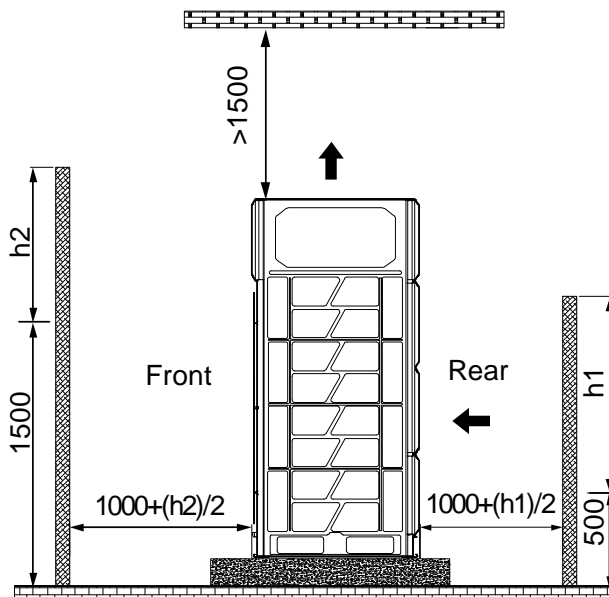
Keep the inlet and outlet of each ODU open and avoid interference.

If there is an obstacle in the space over the unit, the four sides of the unit should be open.

**In the situation depicted in following Figure 2-3.5**

- If there are no walls in front of or behind the unit, it is necessary to reserve a space of 1000mm on both sides.
- If the front wall is higher than 1500mm, a space of at least  $(1000 + (h_2)/2)$  mm is required at the front
- If the rear wall is higher than 500mm, a space of at least  $(1000 + (h_1)/2)$  mm is required at the back.
- When the space above the unit is less than 1500mm, an air ducting device shall be installed to prevent ventilation from short circuiting.
- When the space over the unit is greater than 1500mm, an air ducting device shall be installed if the air circulation is not smooth at the top of the unit.

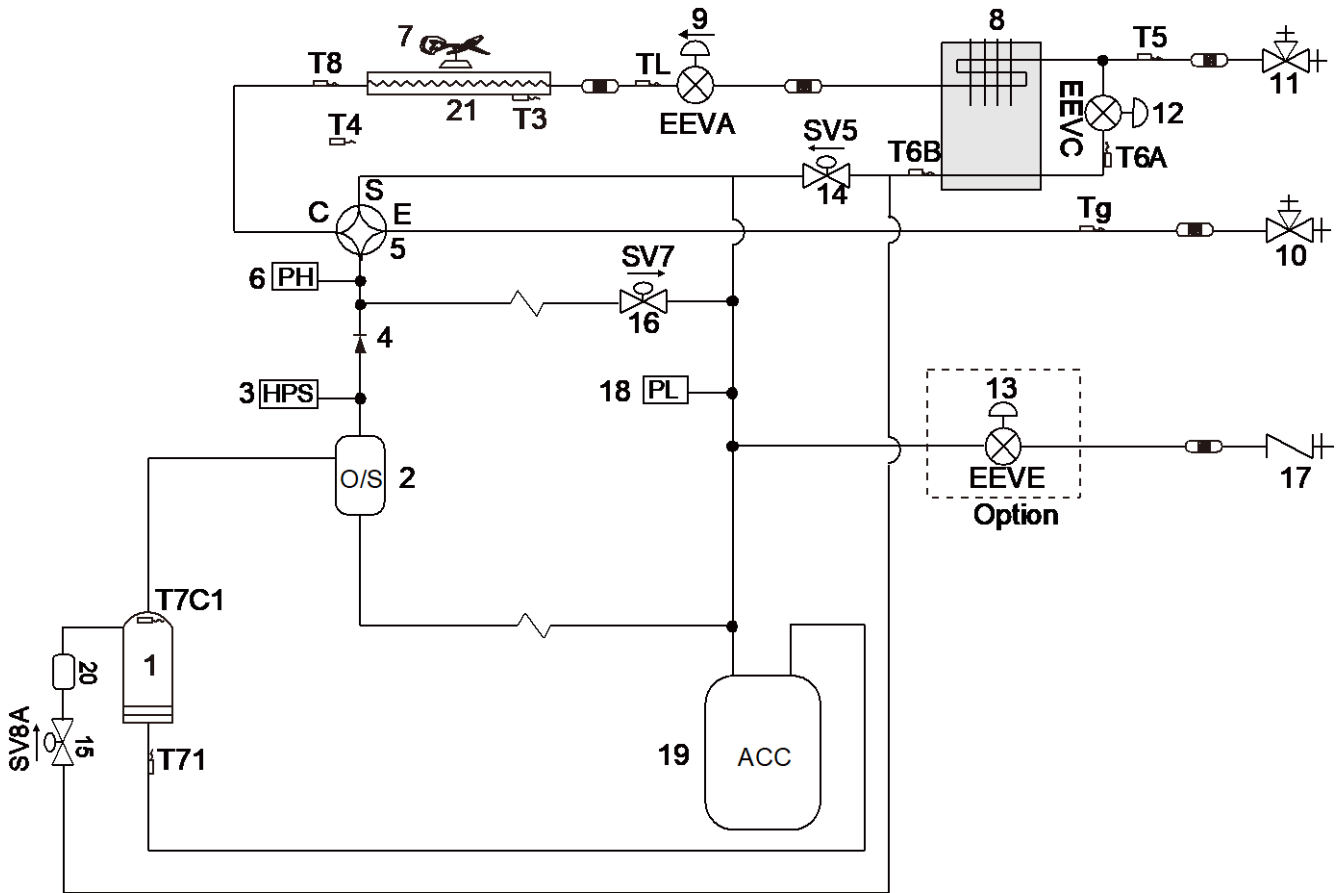
Figure 2-3.5: Top of unit below top of adjacent wall unit (mm)



4 Piping Diagrams

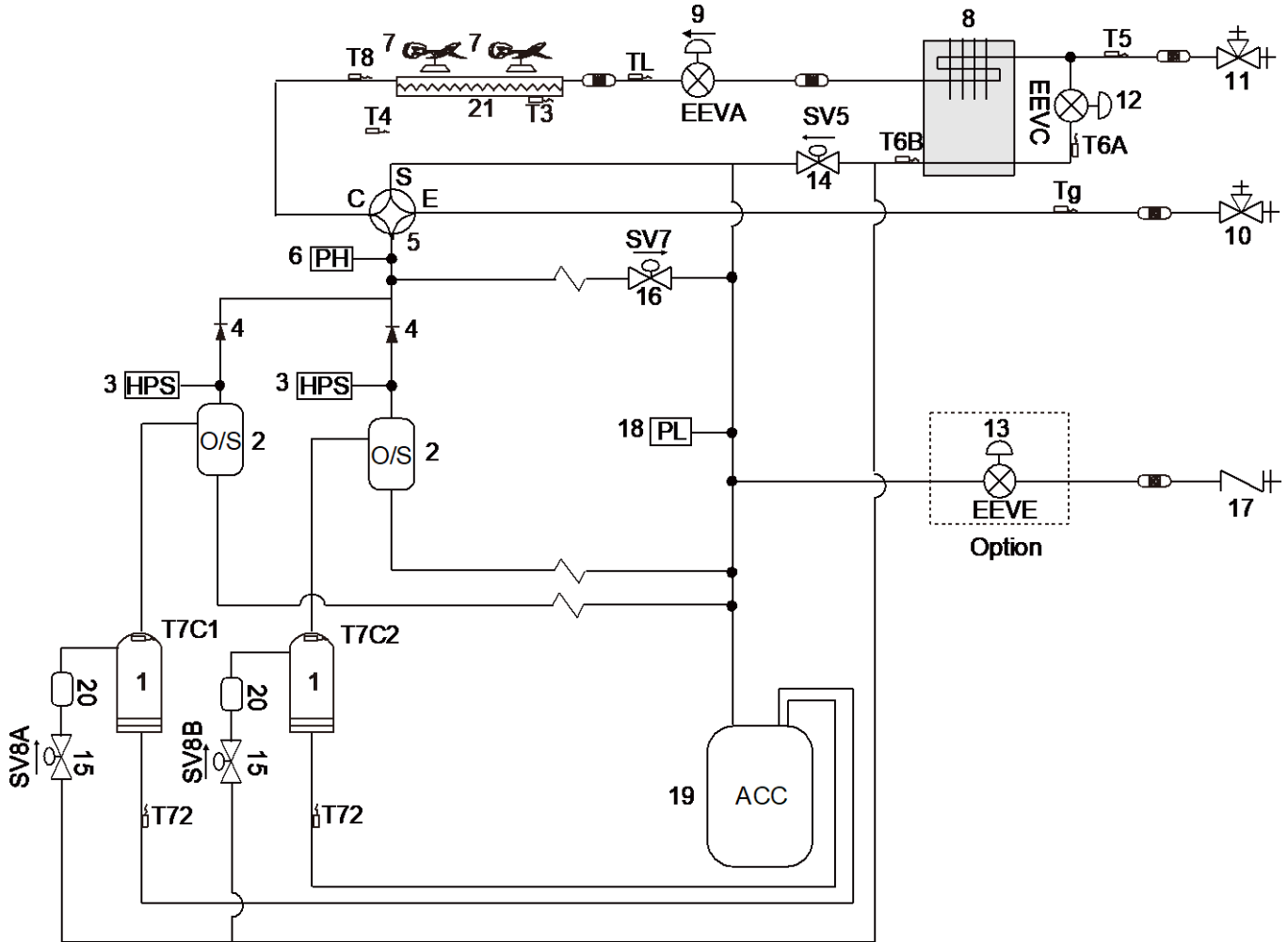
8-16HP

Figure 2-4.1: 8-16HP piping diagram



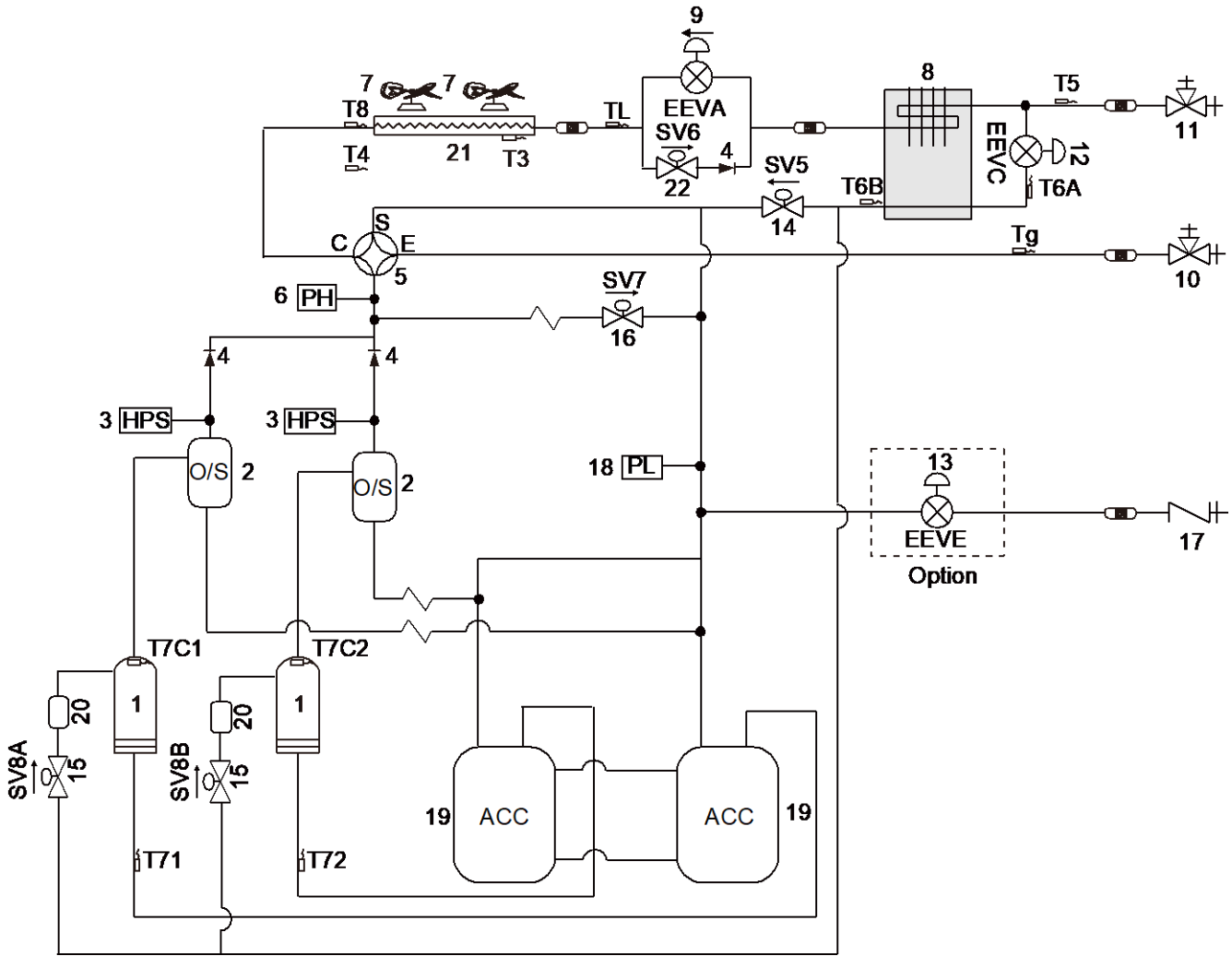
Legend		Legend	
No.	Parts name	No.	Parts name
1	Inverter Compressor	17	Charge port
2	Oil separator	18	Low pressure sensor
3	High pressure switch	19	Gas-liquid separator
4	Check value	20	Muffer
5	Four-way valve(ST1)	21	Heat exchanger
6	High pressure sensor	<b>Sensor Code</b>	<b>Description</b>
7	Inverter Fan	T3	Main exchanger pipe temperature sensor
8	Microchannel heat exchanger	T4	Outdoor ambient temperature sensor
9	Electronic expansion valve (EEVA)	T5	Liquid pipe temperature sensor
10	Stop valve (gas side)	T6A	Microchannel heat exchanger inlet pipe temperature sensor
11	Stop valve (liquid side)	T6B	Microchannel heat exchanger outlet pipe temperature sensor
12	Electronic expansion valve (EEVC)	T71	Suction temperature sensor
13	Electronic expansion valve (Optional EEVE)	T8	Heat exchanger gas temperature sensor
14	Injection bypass solenoid valve (SV5)	Tg	Gas pipe temperature sensor
15	Compressor vapor injection valve (SV8A)	TL	Heat exchanger liquid temperature sensor
16	Hot gas bypass solenoid valve (SV7)	T7C1	Compressor discharge temperature sensor
		Tb	Electric control box chamber temperature sensor

Figure 2-4.2: 18-24HP piping diagram



Legend		Legend	
No.	Parts name	No.	Parts name
1	Inverter Compressor	17	Charge port
2	Oil separator	18	Low pressure sensor
3	High pressure switch	19	Gas-liquid separator
4	Check value	20	Muffler
5	Four-way valve(ST1)	21	Heat exchanger
6	High pressure sensor	<b>Sensor Code</b>	<b>Description</b>
7	Inverter Fan	T3	Main exchanger pipe temperature sensor
8	Microchannel heat exchanger	T4	Outdoor ambient temperature sensor
9	Electronic expansion valve (EEVA/EEVB)	T5	Liquid pipe temperature sensor
10	Stop valve (gas side)	T6A	Microchannel heat exchanger inlet pipe temperature sensor
11	Stop valve (liquid side)	T6B	Microchannel heat exchanger outlet pipe temperature sensor
12	Electronic expansion valve (EEVC)	T71/T72	Suction temperature sensor
13	Electronic expansion valve (Optional EEVE)	T8	Heat exchanger gas temperature sensor
14	Injection bypass solenoid valve (SV5)	Tg	Gas pipe temperature sensor
15	Compressor vapor injection valve (SV8A/B)	TL	Heat exchanger liquid temperature sensor
16	Hot gas bypass solenoid valve (SV7)	T7C1/T7C2	Compressor discharge temperature sensor
		Tb	Electric control box chamber temperature sensor

Figure 2-4.3: 26-32HP piping diagram

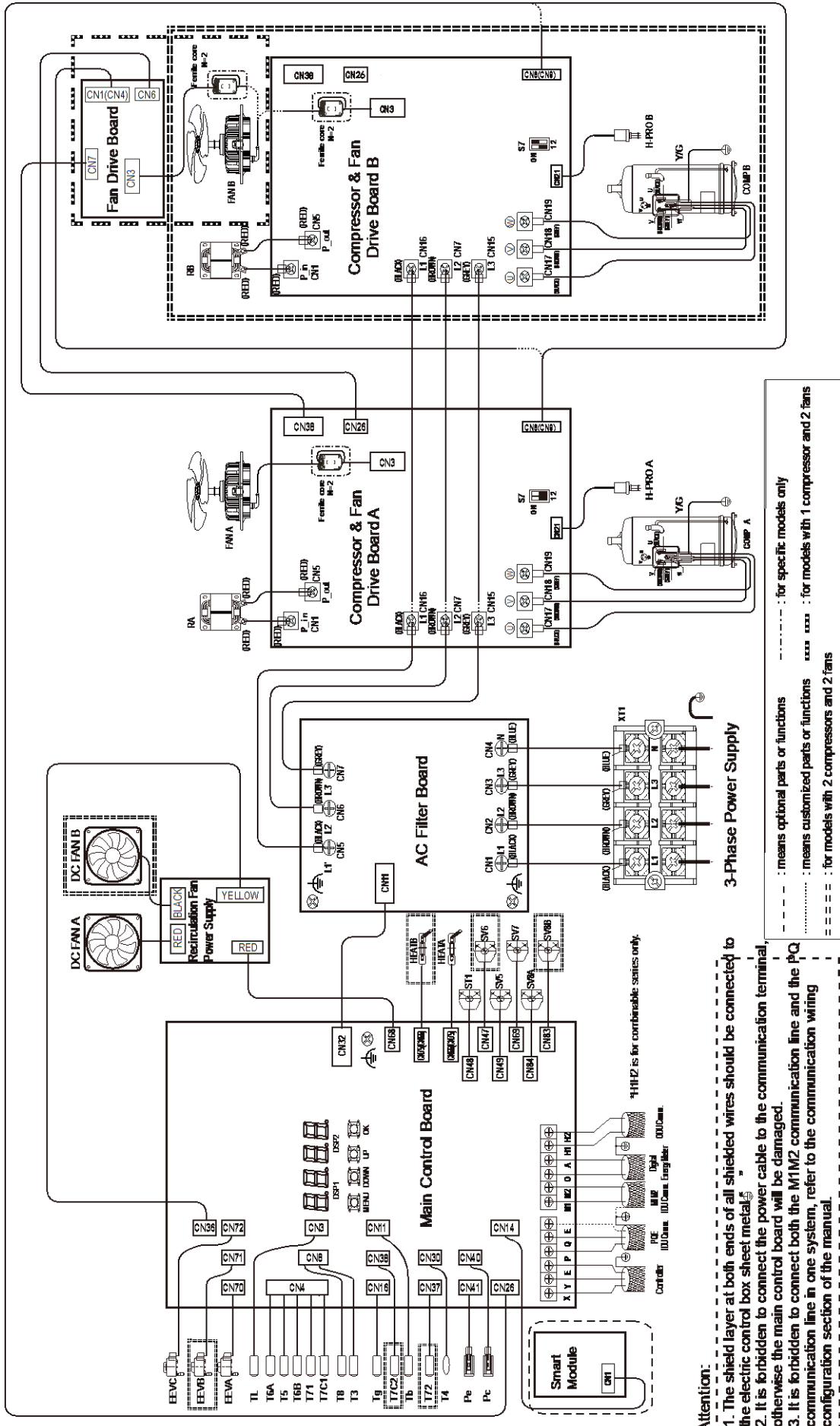


Legend	
No.	Parts name
1	Inverter Compressor
2	Oil separator
3	High pressure switch
4	Check value
5	Four-way valve(ST1)
6	High pressure sensor
7	Inverter Fan
8	Microchannel heat exchanger
9	Electronic expansion valve (EEVA/EEVB)
10	Stop valve (gas side)
11	Stop valve (liquid side)
12	Electronic expansion valve (EEVC)
13	Electronic expansion valve (Optional EEVE)
14	Injection bypass solenoid valve (SV5)
15	Compressor vapor injection valve (SV8A/B)
16	Hot gas bypass solenoid valve (SV7)
17	Charge port
No.	Parts name
18	Low pressure sensor
19	Gas-liquid separator
20	Muffler
21	Heat exchanger
22	Liquid bypass valve(SV6)
Sensor Code	Description
T3	Main exchanger pipe temperature sensor
T4	Outdoor ambient temperature sensor
T5	Liquid pipe temperature sensor
T6A	Microchannel heat exchanger inlet pipe temperature sensor
T6B	Microchannel heat exchanger outlet pipe temperature sensor
T71/T72	Suction temperature sensor
T8	Heat exchanger gas temperature sensor
Tg	Gas pipe temperature sensor
TL	Heat exchanger liquid temperature sensor
T7C1/T7C2	Compressor discharge temperature sensor
Tb	Electric control box chamber temperature sensor

**Key components:**

1. **Oil separator:**  
Separates oil from gas refrigerant pumped out of the compressor and quickly returns it to the compressor. Separation efficiency is up to 99%.
2. **Gas-liquid separator:**  
Separates liquid refrigerant from gas refrigerant, stores liquid refrigerant and oil to protect compressor from liquid hammering.
3. **Electronic expansion valve (EEVA):**  
Controls refrigerant flow and reduces refrigerant pressure.
4. **Four-way valve:**  
Controls heat exchanger function. When open, the heat exchanger functions as an evaporator; when closed, the heat exchanger functions as a condenser.
5. **Microchannel heat exchanger:**  
In cooling mode, it can improve super-cooling degree and the super-cooled refrigerant can achieve better heat exchange in indoor side. In heating mode, the refrigerant comes from the microchannel heat exchanger going to the compressor can increase the refrigerant volume and improve the heating capacity in low ambient temperature. Refrigerant volume in microchannel heat exchanger is controlled according to temperature different between microchannel heat exchanger inlet and outlet or the temperature different between discharge temperature and target discharge temperature.
6. **Solenoid valve SV5:**  
Controls the refrigerant from microchannel heat exchanger to gas-liquid separator.
7. **Solenoid valve SV6:**  
Allows refrigerant to bypass the expansion valves. Opens in cooling mode when discharge temperature exceeds the limit. Closed in heating mode and standby.
8. **Solenoid valve SV7:**  
Bypass pressure at start-up stage and control capacity at low load condition; High-pressure-rise prevention; Discharge superheat protection.
9. **Solenoid valve SV8A/B:**  
Allows refrigerant from microchannel heat exchanger inject directly to the compressor. SV8A opens when compressor startup and closes when compressor stop.
10. **High pressure switch:**  
Regulate system pressure. When system pressure rises above the upper limit, the high pressure switch turn off, stopping the compressor. When the high pressure protection recovers, the compressor restarts.
11. **High/Low pressure sensor**  
Used to detect the system high/low pressure.

5 Wiring Diagrams



**Attention:**

1. The shield layer at both ends of all shielded wires should be connected to the electric control box sheet metal.
2. It is forbidden to connect the power cable to the communication terminal, otherwise the main control board will be damaged.
3. It is forbidden to connect both the M1M2 communication line and the PQ communication line in one system, refer to the communication wiring configuration section of the manual.

- - - - - : means optional parts or functions  
 - - - - - : for specific models only  
 - - - - - : means customized parts or functions  
 - - - - - : for models with 1 compressor and 2 fans  
 - - - - - : for models with 2 compressors and 2 fans

Legend			
Code	Name	Code	Name
COMP A/ COMP B	Compressor	T3	Main exchanger pipe temperature sensor
EEVA/EEVC	Electronic expansion valve	T4	Outdoor ambient temperature sensor
FAN A/ FAN B	DC Fan	T5	Liquid pipe temperature sensor
DC FAN A/DC FAN B	Recirculation Fan	T6A	Microchannel heat exchanger inlet pipe temperature sensor
HEAT A/ HEAT B	Crankcase heater	T6B	Microchannel heat exchanger outlet pipe temperature sensor
RA/RB	Reactance	T71/T72	Suction temperature sensor
ST1	Four-way valve	T8	Heat exchanger gas temperature sensor
SV5-SV8A/B	Solenoid valve	Tg	Gas pipe temperature sensor
H-PRO A/ H-PRO B	High pressure switch	TL	Heat exchanger liquid temperature sensor
Pc	High pressure sensor	T7C1/T7C2	Compressor discharge temperature sensor
Pe	Low pressure sensor	Tb	Electric control box chamber temperature sensor
XT1	Terminal block		

## 6 Electrical Characteristics

Table 2-6.1: Outdoor unit electrical characteristics

Model				Power Supply <sup>1</sup>							Compressor		OFM	
Capacity	Modules			Hz	Volts	Min.	Max.	MCA <sup>2</sup>	TOCA <sup>3</sup>	MFA <sup>4</sup>	MSC <sup>5</sup>	RLA <sup>6</sup>	Power(kW)	FLA
						volts	volts	(A)	(A)	(A)				
8HP	-	-	-	50	380~415	342	440	17	20.7	20	-	12.7	0.56	1.7
10HP	-	-	-	50	380~415	342	440	18.8	22.5	25	-	13	0.56	1.7
12HP	-	-	-	50	380~415	342	440	23	26.8	32	-	17	0.56	1.8
14HP	-	-	-	50	380~415	342	440	26.2	31	32	-	26.8	0.92	2.8
16HP	-	-	-	50	380~415	342	440	31.4	36.2	40	-	31.2	0.92	3
18HP	-	-	-	50	380~415	342	440	33	38	40	-	17.9+17	0.56×2	1.8×2
20HP	-	-	-	50	380~415	342	440	40.5	39.5	50	-	18.5+17.7	0.56×2	1.8×2
22HP	-	-	-	50	380~415	342	440	41.5	47.1	50	-	20+19.2	0.56×2	2.0×2
24HP	-	-	-	50	380~415	342	440	46	52	63	-	22.7+22.2	0.56×2	2.0×2
26HP	-	-	-	50	380~415	342	440	51	54	63	-	20.3+20.2	0.92×2	2.1×2
28HP	-	-	-	50	380~415	342	440	51	57.4	63	-	21.7+22	0.92×2	2.1×2
30HP	-	-	-	50	380~415	342	440	56.8	63.2	80	-	24.5+24.8	0.92×2	2.2×2
32HP	-	-	-	50	380~415	342	440	57	63.4	80	-	25.5+25.8	0.92×2	2.2×2
34HP	20HP	14H	-	50	380~415	342	440	66.7	70.5	50+32	-	(18.5+17.7)+(26.8)	(0.56×2)+(0.92)	(1.8×2)+(2.8)
36HP	20HP	16H	-	50	380~415	342	440	71.9	75.7	50+40	-	(18.5+17.7)+(31.2)	(0.56×2)+(0.92)	(1.8×2)+(3)
38HP	24HP	14H	-	50	380~415	342	440	72.2	83	63+32	-	(22.7+22.2)+(26.8)	(0.56×2)+(0.92)	(2.0×2)+(2.8)
40HP	24HP	16H	-	50	380~415	342	440	77.4	88.2	63+40	-	(22.7+22.2)+(31.2)	(0.56×2)+(0.92)	(2.0×2)+(3)
42HP	24HP	18H	-	50	380~415	342	440	79	90	63+40	-	(22.7+22.2)+(17.9+17.0)	(0.56×2)+(0.56×2)	(2.0×2)+(1.8×2)
44HP	22HP	22H	-	50	380~415	342	440	83	94.2	50+50	-	(20.0+19.2)+(20.0+19.2)	(0.56×2)+(0.56×2)	(2.0×2)+(2.0×2)
46HP	24HP	22H	-	50	380~415	342	440	87.5	99.1	63+50	-	(22.7+22.2)+(20.0+19.2)	(0.56×2)+(0.56×2)	(2.0×2)+(2.0×2)
48HP	24HP	24H	-	50	380~415	342	440	92	104	63+63	-	(22.7+22.2)+(22.7+22.2)	(0.56×2)+(0.56×2)	(2.0×2)+(2.0×2)
50HP	32HP	18H	-	50	380~415	342	440	90	101.4	80+40	-	(25.5+25.8)+(17.9+17.0)	(0.92×2)+(0.56×2)	(2.2×2)+(1.8×2)
52HP	32HP	20H	-	50	380~415	342	440	97.5	102.9	80+50	-	(25.5+25.8)+(18.5+17.7)	(0.92×2)+(0.56×2)	(2.2×2)+(1.8×2)
54HP	32HP	22H	-	50	380~415	342	440	98.5	110.5	80+50	-	(25.5+25.8)+(20.0+19.2)	(0.92×2)+(0.56×2)	(2.2×2)+(2.0×2)
56HP	32HP	24H	-	50	380~415	342	440	103	115.4	80+63	-	(25.5+25.8)+(22.7+22.2)	(0.92×2)+(0.56×2)	(2.2×2)+(2.0×2)
58HP	32HP	26H	-	50	380~415	342	440	108	117.4	80+63	-	(25.5+25.8)+(20.3+20.2)	(0.92×2)+(0.92×2)	(2.2×2)+(2.1×2)
60HP	32HP	28H	-	50	380~415	342	440	108	120.8	80+63	-	(25.5+25.8)+(21.7+22.0)	(0.92×2)+(0.92×2)	(2.2×2)+(2.1×2)
62HP	32HP	30H	-	50	380~415	342	440	113.8	126.6	80+80	-	(25.5+25.8)+(24.5+24.8)	(0.92×2)+(0.92×2)	(2.2×2)+(2.2×2)
64HP	32HP	32H	-	50	380~415	342	440	114	126.8	80+80	-	(25.5+25.8)+(25.5+25.8)	(0.92×2)+(0.92×2)	(2.2×2)+(2.2×2)

Abbreviations:

MCA: Minimum Circuit Amps; TOCA: Total Over-current Amps; MFA: Maximum Fuse Amps; MSC: Maximum Starting Current (A); RLA: Rated Load Amps; FLA: Full Load Amps

Notes:

- Units are suitable for use on electrical systems where voltage supplied to unit terminals is not below or above listed range limits. Maximum allowable voltage variation between phases is 2%.
- Select wire size based on the value of MCA.
- TOCA indicates the total overcurrent amps value of each OC set.
- MFA is used to select overcurrent circuit breakers and residual-current circuit breakers.
- MSC indicates the maximum current on compressor start-up in amps.
- RLA is based on the following conditions: indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB



Table 2-6.1: Outdoor unit electrical characteristics (continues)

Model				Power Supply <sup>1</sup>							Compressor		OFM	
Capacity	Modules			Hz	Volts	Min.	Max.	MCA <sup>2</sup> (A)	TOCA <sup>3</sup> (A)	MFA <sup>4</sup> (A)	MSC <sup>5</sup>	RLA <sup>6</sup> (A)	Power(kW)	FLA (A)
						volts	volts							
66HP	32HP	20HP	14HP	50	380~415	342	440	123.7	133.9	80+50+32		(25.5+25.8)+(18.5+17.7) +(26.8)	(0.92×2)+(0.56×2) +(0.92)	(2.2×2)+(1.8×2) +(2.8)
68HP	32HP	20HP	16HP	50	380~415	342	440	128.9	139.1	80+50+40		(25.5+25.8)+(18.5+17.7) +(31.2)	(0.92×2)+(0.56×2) +(0.92)	(2.2×2)+(1.8×2) +(3)
70HP	32HP	24HP	14HP	50	380~415	342	440	129.2	146.4	80+63+32		(25.5+25.8)+(22.7+22.2) +(26.8)	(0.92×2)+(0.56×2) +(0.92)	(2.2×2)+(2.0×2) +(2.8)
72HP	32HP	24HP	16HP	50	380~415	342	440	134.4	151.6	80+63+40		(25.5+25.8)+(22.7+22.2) +(31.2)	(0.92×2)+(0.56×2) +(0.92)	(2.2×2)+(2.0×2) +(3)
74HP	32HP	24HP	18HP	50	380~415	342	440	136	153.4	80+63+40		(25.5+25.8)+(22.7+22.2) +(17.9+17.0)	(0.92×2)+(0.56×2) +(0.56×2)	(2.2×2)+(2.0×2) +(1.8×2)
76HP	32HP	22HP	22HP	50	380~415	342	440	140	157.6	80+50+50		(25.5+25.8)+(20.0+19.2) +(20.0+19.2)	(0.92×2)+(0.56×2) +(0.56×2)	(2.2×2)+(2.0×2) +(2.0×2)
78HP	32HP	24HP	22HP	50	380~415	342	440	144.5	162.5	80+63+50		(25.5+25.8)+(22.7+22.2) +(20.0+19.2)	(0.92×2)+(0.56×2) +(0.56×2)	(2.2×2)+(2.0×2) +(2.0×2)
80HP	32HP	24HP	24HP	50	380~415	342	440	149	167.4	80+63+63		(25.5+25.8)+(22.7+22.2) +(22.7+22.2)	(0.92×2)+(0.56×2) +(0.56×2)	(2.2×2)+(2.0×2) +(2.0×2)
82HP	32HP	32HP	18HP	50	380~415	342	440	147	164.8	80+80+40		(25.5+25.8)+(25.5+25.8) +(17.9+17.0)	(0.92×2)+(0.92×2) +(0.56×2)	(2.2×2)+(2.2×2) +(1.8×2)
84HP	32HP	32HP	20HP	50	380~415	342	440	154.5	166.3	80+80+50		(25.5+25.8)+(25.5+25.8) +(18.5+17.7)	(0.92×2)+(0.92×2) +(0.56×2)	(2.2×2)+(2.2×2) +(1.8×2)
86HP	32HP	32HP	22HP	50	380~415	342	440	155.5	173.9	80+80+50		(25.5+25.8)+(25.5+25.8) +(20.0+19.2)	(0.92×2)+(0.92×2) +(0.56×2)	(2.2×2)+(2.2×2) +(2.0×2)
88HP	32HP	32HP	24HP	50	380~415	342	440	160	178.8	80+80+63		(25.5+25.8)+(25.5+25.8) +(22.7+22.2)	(0.92×2)+(0.92×2) +(0.56×2)	(2.2×2)+(2.2×2) +(2.0×2)
90HP	32HP	32HP	26HP	50	380~415	342	440	165	180.8	80+80+63		(25.5+25.8)+(25.5+25.8) +(20.3+20.2)	(0.92×2)+(0.92×2) +(0.92×2)	(2.2×2)+(2.2×2) +(2.1×2)
92HP	32HP	32HP	28HP	50	380~415	342	440	165	184.2	80+80+63		(25.5+25.8)+(25.5+25.8) +(21.7+22.0)	(0.92×2)+(0.92×2) +(0.92×2)	(2.2×2)+(2.2×2) +(2.1×2)
94HP	32HP	32HP	30HP	50	380~415	342	440	170.8	190	80+80+80		(25.5+25.8)+(25.5+25.8) +(24.5+24.8)	(0.92×2)+(0.92×2) +(0.92×2)	(2.2×2)+(2.2×2) +(2.2×2)
96HP	32HP	32HP	32HP	50	380~415	342	440	171	190.2	80+80+80		(25.5+25.8)+(25.5+25.8) +(25.5+25.8)	(0.92×2)+(0.92×2) +(0.92×2)	(2.2×2)+(2.2×2) +(2.2×2)

**Abbreviations:**

MCA: Minimum Circuit Amps; TOCA: Total Over-current Amps; MFA: Maximum Fuse Amps; MSC: Maximum Starting Current (A); RLA: Rated Load Amps; FLA: Full Load Amps

**Notes:**

- Units are suitable for use on electrical systems where voltage supplied to unit terminals is not below or above listed range limits. Maximum allowable voltage variation between phases is 2%.
- Select wire size based on the value of MCA.
- TOCA indicates the total overcurrent amps value of each OC set.
- MFA is used to select overcurrent circuit breakers and residual-current circuit breakers.
- MSC indicates the maximum current on compressor start-up in amps.
- RLA is based on the following conditions: indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB

## 7 Functional Components and Safety Devices

Table 2-7.1: 8/10/12/14/16HP functional components and safety devices

Item		8HP	10HP	12HP	14HP	16HP
Compressor	Compressor top and discharge pipe temperature sensors	115°C = 5kΩ ± 3%				
	Crankcase heater	50W				
System	High pressure switch	Off: 4.2 (±0.1) MPa / On: 3.2 (±0.1) MPa				
	High pressure sensor	Output voltage (V) = 0.8696 × P + 0.5 (where P is the discharge pressure in MPa)				
	Heat exchanger temperature sensor	25°C = 10kΩ				
	Outdoor ambient temperature sensor	25°C = 10kΩ				

Table 2-7.2: 18/20/22/24/26HP functional components and safety devices

Item		18HP	20HP	22HP	24HP	26HP
Compressor	Compressor top and discharge pipe temperature sensors	115°C = 5kΩ ± 3%				
	Crankcase heater	50W×2				
System	High pressure switch	Off: 4.2 (±0.1) MPa / On: 3.2 (±0.1) MPa				
	High pressure sensor	Output voltage (V) = 0.8696 × P + 0.5 (where P is the discharge pressure in MPa)				
	Heat exchanger temperature sensor	25°C = 10kΩ				
	Outdoor ambient temperature sensor	25°C = 10kΩ				

Table 2-7.3: 28/30/32HP functional components and safety devices

Item		28HP	30HP	32HP
Compressor	Compressor top and discharge pipe temperature sensors	115°C = 5kΩ ± 3%		
	Crankcase heater	50W×2		
System	High pressure switch	Off: 4.2 (±0.1) MPa / On: 3.2 (±0.1) MPa		
	High pressure sensor	Output voltage (V) = 0.8696 × P + 0.5 (where P is the discharge pressure in MPa)		
	Heat exchanger temperature sensor	25°C = 10kΩ		
	Outdoor ambient temperature sensor	25°C = 10kΩ		









Table2-8.1:8HP cooling capacity(continued)

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
50%	-15	8.17	0.83	9.28	0.89	11.61	1.04	12.83	1.07	14.03	1.12	16.36	1.24	18.69	1.34
	-10	8.17	0.91	9.28	0.97	11.61	1.14	12.83	1.17	14.03	1.22	16.36	1.35	18.69	1.46
	-5	8.17	0.98	9.28	1.05	11.61	1.23	12.83	1.27	14.03	1.32	16.36	1.46	18.69	1.58
	-2	8.17	1.03	9.28	1.10	11.61	1.29	12.83	1.33	14.03	1.38	16.36	1.53	18.69	1.66
	0	8.17	1.06	9.28	1.13	11.61	1.33	12.83	1.36	14.03	1.42	16.36	1.58	18.69	1.71
	2	8.17	1.09	9.28	1.17	11.61	1.37	12.83	1.40	14.03	1.46	16.36	1.62	18.69	1.76
	4	8.17	1.12	9.28	1.20	11.61	1.40	12.83	1.44	14.03	1.51	16.36	1.67	18.69	1.81
	6	8.17	1.15	9.28	1.23	11.61	1.44	12.83	1.49	14.03	1.55	16.36	1.72	18.69	1.86
	8	8.17	1.18	9.28	1.27	11.61	1.48	12.83	1.53	14.03	1.59	16.36	1.76	18.69	1.91
	10	8.17	1.21	9.28	1.30	11.61	1.52	12.83	1.57	14.03	1.63	16.36	1.81	18.69	1.96
	12	8.17	1.25	9.28	1.33	11.61	1.56	12.83	1.61	14.03	1.68	16.36	1.86	18.69	2.01
	14	8.17	1.28	9.28	1.37	11.61	1.60	12.83	1.65	14.03	1.72	16.36	1.91	18.69	2.06
	16	8.17	1.31	9.28	1.40	11.61	1.64	12.83	1.69	14.03	1.76	16.36	1.95	18.69	2.11
	18	8.17	1.34	9.28	1.44	11.61	1.68	12.83	1.73	14.03	1.81	16.36	2.00	18.69	2.17
	20	8.17	1.38	9.28	1.47	11.61	1.73	12.83	1.77	14.03	1.85	16.36	2.05	18.69	2.22
	21	8.17	1.39	9.28	1.49	11.61	1.75	12.83	1.80	14.03	1.87	16.36	2.08	18.69	2.25
	23	8.17	1.43	9.28	1.53	11.61	1.79	12.83	1.84	14.03	1.92	16.36	2.12	18.69	2.30
	25	8.17	1.46	9.28	1.56	11.61	1.83	12.83	1.88	14.03	1.96	16.36	2.17	18.69	2.35
	27	8.17	1.49	9.28	1.60	11.61	1.87	12.83	1.92	14.03	2.01	16.36	2.22	18.69	2.41
	29	8.17	1.53	9.28	1.63	11.61	1.91	12.83	1.97	14.03	2.05	16.36	2.27	18.69	2.46
	31	8.17	1.56	9.28	1.67	11.61	1.96	12.83	2.01	14.03	2.10	16.36	2.33	18.69	2.52
	33	8.17	1.59	9.28	1.71	11.61	2.00	12.83	2.06	14.03	2.14	16.36	2.38	18.69	2.57
35	8.17	1.63	9.28	1.74	11.61	2.04	12.83	2.10	14.03	2.19	16.36	2.43	18.69	2.63	
37	8.17	1.66	9.28	1.78	11.61	2.09	12.83	2.15	14.03	2.24	16.36	2.48	18.69	2.68	
39	8.17	1.70	9.28	1.82	11.61	2.13	12.83	2.19	14.03	2.29	16.36	2.53	18.69	2.74	
41	8.17	1.74	9.28	1.86	11.61	2.18	12.83	2.24	14.03	2.34	16.36	2.59	18.69	2.80	
43	8.17	1.77	9.28	1.90	11.61	2.22	12.83	2.29	14.03	2.39	16.36	2.64	18.69	2.86	
46	8.17	1.81	9.28	1.94	11.61	2.27	12.83	2.34	14.03	2.44	16.36	2.70	18.69	2.92	
48	8.17	1.87	9.28	2.00	11.61	2.34	12.83	2.41	14.03	2.51	16.36	2.78	18.69	3.01	
50	8.17	1.90	9.28	2.04	11.61	2.39	12.83	2.46	14.03	2.56	15.94	2.77	17.33	2.85	
52	8.17	1.94	9.28	2.08	11.61	2.44	12.62	2.47	13.26	2.47	14.52	2.57	15.78	2.64	
55	8.17	1.98	9.28	2.12	11.61	2.48	12.54	2.50	13.17	2.50	14.43	2.60	15.68	2.68	

**Abbreviations:**

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

**Notes:**

Shaded cells indicate rating condition.











Table 2-8.2: 10HP cooling capacity (continued)

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
50%	-15	9.10	1.09	10.38	1.17	13.02	1.38	14.29	1.41	15.56	1.46	18.21	1.63	20.75	1.76
	-10	9.10	1.19	10.38	1.28	13.02	1.50	14.29	1.53	15.56	1.59	18.21	1.77	20.75	1.91
	-5	9.10	1.29	10.38	1.38	13.02	1.62	14.29	1.66	15.56	1.72	18.21	1.91	20.75	2.07
	-2	9.10	1.34	10.38	1.44	13.02	1.70	14.29	1.73	15.56	1.80	18.21	2.00	20.75	2.16
	0	9.10	1.38	10.38	1.49	13.02	1.75	14.29	1.79	15.56	1.85	18.21	2.06	20.75	2.22
	2	9.10	1.42	10.38	1.53	13.02	1.80	14.29	1.84	15.56	1.91	18.21	2.12	20.75	2.29
	4	9.10	1.46	10.38	1.57	13.02	1.85	14.29	1.89	15.56	1.96	18.21	2.18	20.75	2.35
	6	9.10	1.50	10.38	1.62	13.02	1.90	14.29	1.94	15.56	2.01	18.21	2.24	20.75	2.42
	8	9.10	1.54	10.38	1.66	13.02	1.95	14.29	1.99	15.56	2.07	18.21	2.30	20.75	2.48
	10	9.10	1.59	10.38	1.70	13.02	2.00	14.29	2.05	15.56	2.12	18.21	2.36	20.75	2.55
	12	9.10	1.63	10.38	1.75	13.02	2.05	14.29	2.10	15.56	2.18	18.21	2.42	20.75	2.62
	14	9.10	1.67	10.38	1.79	13.02	2.11	14.29	2.15	15.56	2.23	18.21	2.49	20.75	2.68
	16	9.10	1.71	10.38	1.84	13.02	2.16	14.29	2.21	15.56	2.29	18.21	2.55	20.75	2.75
	18	9.10	1.75	10.38	1.88	13.02	2.21	14.29	2.26	15.56	2.35	18.21	2.61	20.75	2.82
	20	9.10	1.79	10.38	1.93	13.02	2.27	14.29	2.31	15.56	2.40	18.21	2.67	20.75	2.88
	21	9.10	1.82	10.38	1.95	13.02	2.29	14.29	2.34	15.56	2.43	18.21	2.70	20.75	2.92
	23	9.10	1.86	10.38	2.00	13.02	2.35	14.29	2.40	15.56	2.49	18.21	2.77	20.75	2.99
	25	9.10	1.90	10.38	2.04	13.02	2.40	14.29	2.45	15.56	2.55	18.21	2.83	20.75	3.06
	27	9.10	1.94	10.38	2.09	13.02	2.46	14.29	2.51	15.56	2.60	18.21	2.90	20.75	3.13
	29	9.10	1.99	10.38	2.14	13.02	2.51	14.29	2.56	15.56	2.66	18.21	2.96	20.75	3.20
	31	9.10	2.03	10.38	2.18	13.02	2.57	14.29	2.62	15.56	2.72	18.21	3.03	20.75	3.27
	33	9.10	2.08	10.38	2.23	13.02	2.62	14.29	2.68	15.56	2.78	18.21	3.09	20.75	3.34
	35	9.10	2.12	10.38	2.28	13.02	2.68	14.29	2.74	15.56	2.84	18.21	3.16	20.75	3.41
	37	9.10	2.17	10.38	2.33	13.02	2.74	14.29	2.80	15.56	2.91	18.21	3.23	20.75	3.49
	39	9.10	2.22	10.38	2.38	13.02	2.80	14.29	2.86	15.56	2.97	18.21	3.30	20.75	3.57
41	9.10	2.27	10.38	2.44	13.02	2.86	14.29	2.93	15.56	3.04	18.21	3.38	20.75	3.65	
43	9.10	2.32	10.38	2.49	13.02	2.93	14.29	2.99	15.56	3.10	18.21	3.45	20.75	3.73	
46	9.10	2.37	10.38	2.54	13.02	2.99	14.29	3.05	15.56	3.17	18.21	3.53	20.75	3.81	
48	9.10	2.44	10.38	2.63	13.02	3.09	14.29	3.15	15.56	3.27	18.21	3.64	20.75	3.93	
50	9.10	2.49	10.38	2.68	13.02	3.15	14.29	3.22	15.56	3.34	17.71	3.61	19.25	3.72	
52	9.10	2.55	10.38	2.74	13.02	3.21	13.94	3.20	14.64	3.21	16.03	3.34	17.43	3.44	
55	9.10	2.60	10.38	2.79	13.02	3.28	13.83	3.24	14.52	3.25	15.91	3.38	17.29	3.48	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.











Table2-8.3:12HP cooling capacity(continued)

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
50%	-15	10.89	1.38	12.41	1.49	15.58	1.75	17.10	1.79	18.62	1.85	21.79	2.06	24.84	2.23
	-10	10.89	1.50	12.41	1.61	15.58	1.89	17.10	1.93	18.62	2.01	21.79	2.23	24.84	2.41
	-5	10.89	1.62	12.41	1.73	15.58	2.04	17.10	2.08	18.62	2.16	21.79	2.41	24.84	2.60
	-2	10.89	1.69	12.41	1.81	15.58	2.13	17.10	2.18	18.62	2.26	21.79	2.51	24.84	2.71
	0	10.89	1.73	12.41	1.86	15.58	2.19	17.10	2.24	18.62	2.32	21.79	2.58	24.84	2.79
	2	10.89	1.78	12.41	1.91	15.58	2.25	17.10	2.30	18.62	2.39	21.79	2.66	24.84	2.87
	4	10.89	1.83	12.41	1.97	15.58	2.31	17.10	2.36	18.62	2.45	21.79	2.73	24.84	2.94
	6	10.89	1.88	12.41	2.02	15.58	2.37	17.10	2.42	18.62	2.52	21.79	2.80	24.84	3.02
	8	10.89	1.93	12.41	2.07	15.58	2.44	17.10	2.49	18.62	2.58	21.79	2.87	24.84	3.10
	10	10.89	1.98	12.41	2.12	15.58	2.50	17.10	2.55	18.62	2.65	21.79	2.95	24.84	3.18
	12	10.89	2.03	12.41	2.18	15.58	2.56	17.10	2.62	18.62	2.72	21.79	3.02	24.84	3.26
	14	10.89	2.08	12.41	2.23	15.58	2.62	17.10	2.68	18.62	2.78	21.79	3.09	24.84	3.34
	16	10.89	2.13	12.41	2.28	15.58	2.69	17.10	2.74	18.62	2.85	21.79	3.17	24.84	3.42
	18	10.89	2.18	12.41	2.34	15.58	2.75	17.10	2.81	18.62	2.92	21.79	3.25	24.84	3.50
	20	10.89	2.23	12.41	2.39	15.58	2.82	17.10	2.88	18.62	2.99	21.79	3.32	24.84	3.59
	21	10.89	2.26	12.41	2.42	15.58	2.85	17.10	2.91	18.62	3.02	21.79	3.36	24.84	3.63
	23	10.89	2.31	12.41	2.48	15.58	2.91	17.10	2.98	18.62	3.09	21.79	3.44	24.84	3.71
	25	10.89	2.36	12.41	2.53	15.58	2.98	17.10	3.04	18.62	3.16	21.79	3.51	24.84	3.79
	27	10.89	2.41	12.41	2.59	15.58	3.04	17.10	3.11	18.62	3.23	21.79	3.59	24.84	3.88
	29	10.89	2.46	12.41	2.64	15.58	3.11	17.10	3.18	18.62	3.30	21.79	3.67	24.84	3.96
31	10.89	2.52	12.41	2.70	15.58	3.18	17.10	3.25	18.62	3.37	21.79	3.75	24.84	4.05	
33	10.89	2.57	12.41	2.76	15.58	3.24	17.10	3.31	18.62	3.44	21.79	3.83	24.84	4.13	
35	10.89	2.62	12.41	2.82	15.58	3.31	17.10	3.38	18.62	3.51	21.79	3.91	24.84	4.22	
37	10.89	2.69	12.41	2.88	15.58	3.39	17.10	3.46	18.62	3.60	21.79	4.00	24.84	4.32	
39	10.89	2.75	12.41	2.95	15.58	3.47	17.10	3.55	18.62	3.68	21.79	4.10	24.84	4.42	
41	10.89	2.81	12.41	3.02	15.58	3.55	17.10	3.63	18.62	3.77	21.79	4.19	24.84	4.52	
43	10.89	2.88	12.41	3.09	15.58	3.63	17.10	3.71	18.62	3.85	21.79	4.29	24.84	4.63	
46	10.89	2.94	12.41	3.16	15.58	3.72	17.10	3.80	18.62	3.94	21.79	4.38	24.84	4.73	
48	10.89	3.04	12.41	3.27	15.58	3.84	17.10	3.92	18.62	4.07	21.79	4.53	24.84	4.89	
50	10.89	3.11	12.41	3.34	15.58	3.92	17.10	4.01	18.62	4.16	21.19	4.50	23.03	4.63	
52	10.89	3.17	12.41	3.41	15.58	4.01	16.42	3.93	17.24	3.94	18.88	4.10	20.52	4.22	
55	10.89	3.24	12.41	3.48	14.19	3.73	14.94	3.65	15.69	3.66	17.18	3.81	18.68	3.92	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.





















Table 2-8.5: 16HP cooling capacity(continued)

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
50%	-15	14.62	1.56	16.69	1.67	20.83	1.96	22.90	2.00	25.09	2.09	29.23	2.32	33.38	2.51
	-10	14.62	1.76	16.69	1.89	20.83	2.21	22.90	2.26	25.09	2.36	29.23	2.62	33.38	2.83
	-5	14.62	1.96	16.69	2.11	20.83	2.47	22.90	2.53	25.09	2.64	29.23	2.92	33.38	3.16
	-2	14.62	2.09	16.69	2.25	20.83	2.63	22.90	2.69	25.09	2.81	29.23	3.11	33.38	3.36
	0	14.62	2.17	16.69	2.34	20.83	2.73	22.90	2.79	25.09	2.92	29.23	3.23	33.38	3.49
	2	14.62	2.26	16.69	2.43	20.83	2.84	22.90	2.90	25.09	3.03	29.23	3.36	33.38	3.63
	4	14.62	2.34	16.69	2.52	20.83	2.94	22.90	3.01	25.09	3.15	29.23	3.48	33.38	3.77
	6	14.62	2.43	16.69	2.61	20.83	3.05	22.90	3.12	25.09	3.26	29.23	3.61	33.38	3.90
	8	14.62	2.51	16.69	2.70	20.83	3.16	22.90	3.23	25.09	3.38	29.23	3.74	33.38	4.04
	10	14.62	2.60	16.69	2.79	20.83	3.27	22.90	3.34	25.09	3.49	29.23	3.87	33.38	4.18
	12	14.62	2.68	16.69	2.89	20.83	3.38	22.90	3.45	25.09	3.61	29.23	4.00	33.38	4.32
	14	14.62	2.77	16.69	2.98	20.83	3.49	22.90	3.57	25.09	3.73	29.23	4.13	33.38	4.46
	16	14.62	2.86	16.69	3.08	20.83	3.60	22.90	3.68	25.09	3.84	29.23	4.26	33.38	4.60
	18	14.62	2.95	16.69	3.17	20.83	3.71	22.90	3.79	25.09	3.96	29.23	4.39	33.38	4.75
	20	14.62	3.04	16.69	3.27	20.83	3.82	22.90	3.91	25.09	4.08	29.23	4.52	33.38	4.89
	21	14.62	3.08	16.69	3.32	20.83	3.88	22.90	3.97	25.09	4.14	29.23	4.59	33.38	4.96
	23	14.62	3.17	16.69	3.41	20.83	3.99	22.90	4.08	25.09	4.27	29.23	4.72	33.38	5.11
	25	14.62	3.26	16.69	3.51	20.83	4.10	22.90	4.20	25.09	4.39	29.23	4.86	33.38	5.25
	27	14.62	3.36	16.69	3.61	20.83	4.22	22.90	4.32	25.09	4.51	29.23	4.99	33.38	5.40
	29	14.62	3.45	16.69	3.71	20.83	4.33	22.90	4.44	25.09	4.63	29.23	5.13	33.38	5.55
	31	14.62	3.54	16.69	3.81	20.83	4.45	22.90	4.55	25.09	4.76	29.23	5.27	33.38	5.70
	33	14.62	3.63	16.69	3.91	20.83	4.57	22.90	4.67	25.09	4.88	29.23	5.41	33.38	5.85
	35	14.62	3.73	16.69	4.01	20.83	4.69	22.90	4.79	25.09	5.01	29.23	5.55	33.38	6.00
	37	14.62	3.81	16.69	4.10	20.83	4.79	22.90	4.91	25.09	5.12	29.23	5.67	33.38	6.14
	39	14.62	3.90	16.69	4.19	20.83	4.90	22.90	5.02	25.09	5.24	29.23	5.80	33.38	6.28
	41	14.62	3.99	16.69	4.29	20.83	5.01	22.90	5.13	25.09	5.36	29.23	5.93	33.38	6.42
	43	14.62	4.07	16.69	4.38	20.83	5.12	22.90	5.24	25.09	5.48	29.23	6.06	33.38	6.56
46	14.62	4.16	16.69	4.48	20.83	5.23	22.90	5.36	25.09	5.60	29.23	6.20	33.38	6.70	
48	14.62	4.30	16.69	4.62	20.83	5.40	22.90	5.53	25.09	5.77	29.23	6.39	33.38	6.91	
50	14.62	4.39	16.69	4.72	20.83	5.52	22.90	5.64	25.09	5.90	28.46	6.36	30.94	6.54	
52	14.62	4.48	16.69	4.81	20.83	5.63	22.05	5.55	23.15	5.55	25.36	5.78	27.56	5.95	
55	14.51	4.53	16.45	4.84	18.38	5.07	19.35	4.97	20.32	4.97	22.25	5.18	24.19	5.33	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.









Table2-8.6:18HP cooling capacity(continued)

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
50%	-15	16.19	1.82	18.57	1.96	23.21	2.30	25.48	2.35	27.85	2.45	32.50	2.71	37.14	2.94
	-10	16.19	2.03	18.57	2.19	23.21	2.57	25.48	2.63	27.85	2.74	32.50	3.04	37.14	3.28
	-5	16.19	2.25	18.57	2.43	23.21	2.85	25.48	2.91	27.85	3.03	32.50	3.36	37.14	3.64
	-2	16.19	2.38	18.57	2.57	23.21	3.01	25.48	3.08	27.85	3.21	32.50	3.56	37.14	3.85
	0	16.19	2.47	18.57	2.67	23.21	3.13	25.48	3.19	27.85	3.33	32.50	3.69	37.14	4.00
	2	16.19	2.56	18.57	2.77	23.21	3.24	25.48	3.31	27.85	3.45	32.50	3.83	37.14	4.14
	4	16.19	2.65	18.57	2.86	23.21	3.35	25.48	3.43	27.85	3.57	32.50	3.96	37.14	4.29
	6	16.19	2.74	18.57	2.96	23.21	3.47	25.48	3.54	27.85	3.69	32.50	4.10	37.14	4.43
	8	16.19	2.83	18.57	3.06	23.21	3.58	25.48	3.66	27.85	3.82	32.50	4.23	37.14	4.58
	10	16.19	2.92	18.57	3.16	23.21	3.70	25.48	3.78	27.85	3.94	32.50	4.37	37.14	4.73
	12	16.19	3.02	18.57	3.26	23.21	3.82	25.48	3.90	27.85	4.06	32.50	4.51	37.14	4.88
	14	16.19	3.11	18.57	3.36	23.21	3.94	25.48	4.02	27.85	4.19	32.50	4.65	37.14	5.03
	16	16.19	3.20	18.57	3.46	23.21	4.06	25.48	4.14	27.85	4.32	32.50	4.79	37.14	5.18
	18	16.19	3.30	18.57	3.56	23.21	4.17	25.48	4.26	27.85	4.44	32.50	4.93	37.14	5.33
	20	16.19	3.39	18.57	3.67	23.21	4.29	25.48	4.39	27.85	4.57	32.50	5.07	37.14	5.49
	21	16.19	3.44	18.57	3.72	23.21	4.36	25.48	4.45	27.85	4.64	32.50	5.14	37.14	5.57
	23	16.19	3.54	18.57	3.82	23.21	4.48	25.48	4.57	27.85	4.77	32.50	5.29	37.14	5.72
	25	16.19	3.63	18.57	3.93	23.21	4.60	25.48	4.70	27.85	4.90	32.50	5.43	37.14	5.88
	27	16.19	3.73	18.57	4.03	23.21	4.72	25.48	4.82	27.85	5.03	32.50	5.58	37.14	6.03
	29	16.19	3.83	18.57	4.14	23.21	4.85	25.48	4.95	27.85	5.16	32.50	5.72	37.14	6.19
	31	16.19	3.93	18.57	4.24	23.21	4.97	25.48	5.08	27.85	5.29	32.50	5.87	37.14	6.35
	33	16.19	4.03	18.57	4.35	23.21	5.10	25.48	5.20	27.85	5.42	32.50	6.02	37.14	6.51
	35	16.19	4.13	18.57	4.46	23.21	5.22	25.48	5.33	27.85	5.56	32.50	6.17	37.14	6.67
	37	16.19	4.22	18.57	4.56	23.21	5.34	25.48	5.45	27.85	5.68	32.50	6.31	37.14	6.82
	39	16.19	4.31	18.57	4.66	23.21	5.46	25.48	5.58	27.85	5.81	32.50	6.45	37.14	6.98
	41	16.19	4.41	18.57	4.76	23.21	5.58	25.48	5.70	27.85	5.94	32.50	6.59	37.14	7.13
	43	16.19	4.50	18.57	4.87	23.21	5.70	25.48	5.82	27.85	6.07	32.50	6.73	37.14	7.28
	46	16.19	4.60	18.57	4.97	23.21	5.82	25.48	5.94	27.85	6.19	32.50	6.87	37.14	7.44
48	16.19	4.74	18.57	5.13	23.21	6.00	25.48	6.13	27.85	6.39	32.50	7.09	37.14	7.67	
50	16.19	4.84	18.57	5.23	23.21	6.13	25.48	6.26	27.85	6.52	31.62	7.04	34.38	7.24	
52	16.19	4.94	18.57	5.34	23.21	6.25	24.50	6.14	25.72	6.15	28.17	6.40	30.63	6.58	
55	16.12	5.02	18.28	5.36	20.43	5.61	21.50	5.49	22.57	5.50	24.73	5.73	26.88	5.89	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.











Table2-8.7:20HP cooling capacity(continued)

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	-15	18.23	1.75	20.75	1.87	26.02	2.20	28.55	2.25	31.19	2.34	36.34	2.59	41.50	2.81
	-10	18.23	2.01	20.75	2.16	26.02	2.54	28.55	2.59	31.19	2.70	36.34	2.99	41.50	3.23
	-5	18.23	2.28	20.75	2.45	26.02	2.88	28.55	2.94	31.19	3.06	36.34	3.39	41.50	3.67
	-2	18.23	2.45	20.75	2.63	26.02	3.08	28.55	3.15	31.19	3.28	36.34	3.63	41.50	3.93
	0	18.23	2.56	20.75	2.74	26.02	3.22	28.55	3.29	31.19	3.43	36.34	3.80	41.50	4.11
	2	18.23	2.67	20.75	2.86	26.02	3.36	28.55	3.43	31.19	3.58	36.34	3.96	41.50	4.28
	4	18.23	2.78	20.75	2.98	26.02	3.50	28.55	3.58	31.19	3.73	36.34	4.13	41.50	4.46
	6	18.23	2.89	20.75	3.10	26.02	3.65	28.55	3.72	31.19	3.88	36.34	4.30	41.50	4.65
	8	18.23	3.01	20.75	3.23	26.02	3.79	28.55	3.87	31.19	4.03	36.34	4.46	41.50	4.83
	10	18.23	3.12	20.75	3.35	26.02	3.93	28.55	4.02	31.19	4.18	36.34	4.63	41.50	5.01
	12	18.23	3.24	20.75	3.47	26.02	4.08	28.55	4.16	31.19	4.34	36.34	4.80	41.50	5.19
	14	18.23	3.35	20.75	3.59	26.02	4.22	28.55	4.31	31.19	4.49	36.34	4.97	41.50	5.38
	16	18.23	3.47	20.75	3.72	26.02	4.37	28.55	4.46	31.19	4.65	36.34	5.15	41.50	5.57
	18	18.23	3.59	20.75	3.84	26.02	4.52	28.55	4.61	31.19	4.80	36.34	5.32	41.50	5.75
	20	18.23	3.70	20.75	3.97	26.02	4.67	28.55	4.76	31.19	4.96	36.34	5.50	41.50	5.94
	21	18.23	3.76	20.75	4.03	26.02	4.74	28.55	4.84	31.19	5.04	36.34	5.58	41.50	6.04
	23	18.23	3.88	20.75	4.16	26.02	4.89	28.55	4.99	31.19	5.20	36.34	5.76	41.50	6.23
	25	18.23	4.00	20.75	4.29	26.02	5.04	28.55	5.15	31.19	5.36	36.34	5.94	41.50	6.42
	27	18.23	4.12	20.75	4.42	26.02	5.19	28.55	5.30	31.19	5.52	36.34	6.12	41.50	6.61
	29	18.23	4.24	20.75	4.55	26.02	5.34	28.55	5.46	31.19	5.69	36.34	6.30	41.50	6.81
	31	18.23	4.36	20.75	4.68	26.02	5.50	28.55	5.62	31.19	5.85	36.34	6.48	41.50	7.00
	33	18.23	4.49	20.75	4.81	26.02	5.65	28.55	5.77	31.19	6.01	36.34	6.66	41.50	7.20
	35	18.23	4.61	20.75	4.94	26.02	5.81	28.55	5.93	31.19	6.18	36.34	6.84	41.50	7.40
	37	18.23	4.70	20.75	5.04	26.02	5.92	28.55	6.05	31.19	6.30	36.34	6.98	41.50	7.54
	39	18.23	4.79	20.75	5.14	26.02	6.04	28.55	6.16	31.19	6.42	36.34	7.11	41.50	7.69
	41	18.23	4.88	20.75	5.24	26.02	6.15	28.55	6.28	31.19	6.54	36.34	7.25	41.50	7.84
	43	18.23	4.97	20.75	5.33	26.02	6.27	28.55	6.40	31.19	6.67	36.34	7.38	41.50	7.98
	46	18.23	5.07	20.75	5.43	26.02	6.38	28.55	6.52	31.19	6.79	36.34	7.52	41.50	8.13
	48	18.23	5.21	20.75	5.58	26.02	6.56	28.55	6.70	31.19	6.98	36.34	7.73	41.50	8.35
	50	18.23	5.30	20.75	5.68	26.02	6.68	28.55	6.82	31.19	7.10	35.42	7.66	38.50	7.89
	52	18.23	5.39	20.75	5.78	26.02	6.79	27.44	6.67	28.81	6.68	31.56	6.95	34.30	7.15
	55	18.06	5.44	20.47	5.81	22.88	6.08	24.08	5.96	25.28	5.96	27.69	6.21	30.10	6.39

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.











# MDV8 ECO VRF 50Hz



Table 2-8.8: 22HP cooling capacity (continued)

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
50%	-15	20.02	2.24	22.79	2.40	28.59	2.82	31.36	2.88	34.25	3.00	39.92	3.32	45.59	3.59
	-10	20.02	2.54	22.79	2.73	28.59	3.21	31.36	3.27	34.25	3.41	39.92	3.78	45.59	4.09
	-5	20.02	2.86	22.79	3.06	28.59	3.60	31.36	3.68	34.25	3.83	39.92	4.24	45.59	4.59
	-2	20.02	3.05	22.79	3.27	28.59	3.84	31.36	3.92	34.25	4.08	39.92	4.52	45.59	4.89
	0	20.02	3.17	22.79	3.40	28.59	4.00	31.36	4.08	34.25	4.25	39.92	4.71	45.59	5.10
	2	20.02	3.30	22.79	3.54	28.59	4.16	31.36	4.25	34.25	4.43	39.92	4.90	45.59	5.30
	4	20.02	3.43	22.79	3.68	28.59	4.33	31.36	4.42	34.25	4.60	39.92	5.09	45.59	5.51
	6	20.02	3.56	22.79	3.82	28.59	4.49	31.36	4.58	34.25	4.77	39.92	5.29	45.59	5.72
	8	20.02	3.69	22.79	3.96	28.59	4.65	31.36	4.75	34.25	4.95	39.92	5.48	45.59	5.93
	10	20.02	3.82	22.79	4.10	28.59	4.82	31.36	4.92	34.25	5.12	39.92	5.68	45.59	6.14
	12	20.02	3.96	22.79	4.24	28.59	4.99	31.36	5.09	34.25	5.30	39.92	5.87	45.59	6.35
	14	20.02	4.09	22.79	4.39	28.59	5.16	31.36	5.26	34.25	5.48	39.92	6.07	45.59	6.57
	16	20.02	4.22	22.79	4.53	28.59	5.33	31.36	5.44	34.25	5.66	39.92	6.27	45.59	6.78
	18	20.02	4.36	22.79	4.68	28.59	5.50	31.36	5.61	34.25	5.84	39.92	6.47	45.59	7.00
	20	20.02	4.50	22.79	4.82	28.59	5.67	31.36	5.79	34.25	6.02	39.92	6.67	45.59	7.22
	21	20.02	4.56	22.79	4.90	28.59	5.75	31.36	5.87	34.25	6.12	39.92	6.78	45.59	7.33
	23	20.02	4.70	22.79	5.04	28.59	5.93	31.36	6.05	34.25	6.30	39.92	6.98	45.59	7.55
	25	20.02	4.84	22.79	5.19	28.59	6.10	31.36	6.23	34.25	6.49	39.92	7.19	45.59	7.77
	27	20.02	4.98	22.79	5.34	28.59	6.28	31.36	6.41	34.25	6.67	39.92	7.39	45.59	7.99
	29	20.02	5.12	22.79	5.49	28.59	6.45	31.36	6.59	34.25	6.86	39.92	7.60	45.59	8.22
	31	20.02	5.26	22.79	5.64	28.59	6.63	31.36	6.77	34.25	7.05	39.92	7.81	45.59	8.45
	33	20.02	5.40	22.79	5.79	28.59	6.81	31.36	6.95	34.25	7.24	39.92	8.02	45.59	8.67
	35	20.02	5.55	22.79	5.95	28.59	6.99	31.36	7.14	34.25	7.43	39.92	8.23	45.59	8.90
	37	20.02	5.66	22.79	6.07	28.59	7.13	31.36	7.28	34.25	7.58	39.92	8.40	45.59	9.08
	39	20.02	5.77	22.79	6.19	28.59	7.27	31.36	7.42	34.25	7.73	39.92	8.57	45.59	9.26
	41	20.02	5.88	22.79	6.31	28.59	7.42	31.36	7.57	34.25	7.88	39.92	8.73	45.59	9.44
43	20.02	6.00	22.79	6.43	28.59	7.56	31.36	7.72	34.25	8.04	39.92	8.90	45.59	9.63	
46	20.02	6.11	22.79	6.56	28.59	7.70	31.36	7.86	34.25	8.19	39.92	9.07	45.59	9.81	
48	20.02	6.29	22.79	6.74	28.59	7.92	31.36	8.09	34.25	8.42	39.92	9.33	45.59	10.09	
50	20.02	6.40	22.79	6.87	28.59	8.07	31.36	8.24	34.25	8.58	38.90	9.26	42.28	9.53	
52	20.02	6.52	22.79	6.99	28.59	8.22	30.14	8.06	31.64	8.07	34.66	8.40	37.67	8.65	
55	19.83	6.58	22.48	7.02	25.12	7.35	26.45	7.20	27.77	7.21	30.41	7.51	33.06	7.73	

**Abbreviations:**

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

**Notes:**

Shaded cells indicate rating condition.









Table2-8.9:24HP cooling capacity(continued)

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
50%	-15	21.76	2.51	24.78	2.69	30.99	3.15	34.14	3.23	37.19	3.36	43.38	3.72	49.70	4.04
	-10	21.76	2.83	24.78	3.04	30.99	3.56	34.14	3.65	37.19	3.79	43.38	4.20	49.70	4.55
	-5	21.76	3.16	24.78	3.39	30.99	3.97	34.14	4.07	37.19	4.22	43.38	4.68	49.70	5.08
	-2	21.76	3.35	24.78	3.60	30.99	4.22	34.14	4.32	37.19	4.49	43.38	4.98	49.70	5.40
	0	21.76	3.49	24.78	3.74	30.99	4.38	34.14	4.50	37.19	4.67	43.38	5.18	49.70	5.62
	2	21.76	3.62	24.78	3.89	30.99	4.55	34.14	4.67	37.19	4.85	43.38	5.38	49.70	5.83
	4	21.76	3.76	24.78	4.03	30.99	4.72	34.14	4.84	37.19	5.03	43.38	5.58	49.70	6.05
	6	21.76	3.89	24.78	4.18	30.99	4.89	34.14	5.02	37.19	5.21	43.38	5.78	49.70	6.27
	8	21.76	4.03	24.78	4.33	30.99	5.07	34.14	5.20	37.19	5.40	43.38	5.98	49.70	6.49
	10	21.76	4.17	24.78	4.47	30.99	5.24	34.14	5.37	37.19	5.58	43.38	6.19	49.70	6.71
	12	21.76	4.31	24.78	4.62	30.99	5.42	34.14	5.55	37.19	5.77	43.38	6.39	49.70	6.94
	14	21.76	4.45	24.78	4.77	30.99	5.59	34.14	5.73	37.19	5.95	43.38	6.60	49.70	7.16
	16	21.76	4.59	24.78	4.92	30.99	5.77	34.14	5.91	37.19	6.14	43.38	6.81	49.70	7.39
	18	21.76	4.73	24.78	5.08	30.99	5.95	34.14	6.10	37.19	6.33	43.38	7.02	49.70	7.62
	20	21.76	4.87	24.78	5.23	30.99	6.12	34.14	6.28	37.19	6.52	43.38	7.23	49.70	7.85
	21	21.76	4.94	24.78	5.30	30.99	6.21	34.14	6.37	37.19	6.62	43.38	7.34	49.70	7.96
	23	21.76	5.09	24.78	5.46	30.99	6.40	34.14	6.56	37.19	6.81	43.38	7.55	49.70	8.19
	25	21.76	5.23	24.78	5.61	30.99	6.58	34.14	6.74	37.19	7.00	43.38	7.77	49.70	8.43
	27	21.76	5.38	24.78	5.77	30.99	6.76	34.14	6.93	37.19	7.20	43.38	7.98	49.70	8.66
	29	21.76	5.52	24.78	5.93	30.99	6.95	34.14	7.12	37.19	7.40	43.38	8.20	49.70	8.90
	31	21.76	5.67	24.78	6.09	30.99	7.13	34.14	7.31	37.19	7.59	43.38	8.42	49.70	9.14
	33	21.76	5.82	24.78	6.25	30.99	7.32	34.14	7.50	37.19	7.79	43.38	8.64	49.70	9.37
	35	21.76	5.97	24.78	6.41	30.99	7.51	34.14	7.70	37.19	7.99	43.38	8.86	49.70	9.62
37	21.76	6.10	24.78	6.54	30.99	7.66	34.14	7.86	37.19	8.16	43.38	9.05	49.70	9.82	
39	21.76	6.22	24.78	6.68	30.99	7.82	34.14	8.02	37.19	8.33	43.38	9.24	49.70	10.02	
41	21.76	6.35	24.78	6.82	30.99	7.99	34.14	8.19	37.19	8.50	43.38	9.43	49.70	10.23	
43	21.76	6.48	24.78	6.95	30.99	8.15	34.14	8.35	37.19	8.68	43.38	9.62	49.70	10.44	
46	21.76	6.61	24.78	7.09	30.99	8.31	34.14	8.52	37.19	8.85	43.38	9.81	49.70	10.65	
48	21.76	6.81	24.78	7.30	30.99	8.56	34.14	8.77	37.19	9.11	43.38	10.10	49.70	10.96	
50	21.76	6.94	24.78	7.45	30.99	8.72	34.14	8.94	37.19	9.29	42.38	10.06	46.06	10.36	
52	21.76	7.07	24.78	7.59	30.99	8.89	32.83	8.76	34.47	8.78	37.75	9.14	41.04	9.40	
55	21.61	7.16	24.49	7.64	27.37	8.00	28.81	7.84	30.25	7.85	33.13	8.17	36.01	8.41	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.





Table 2-8.10: 26HP cooling capacity (continued)

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		KW	KW	KW	KW	KW	KW	KW	KW	KW	KW	KW	KW	KW	KW
110%	-15	52.46	14.10	59.95	15.18	74.90	17.76	82.28	18.16	89.76	18.89	97.54	19.51	99.55	10.38
	-10	52.46	15.76	59.95	16.97	74.90	19.86	82.28	20.31	89.76	21.12	97.54	21.82	99.55	11.61
	-5	52.46	17.45	59.95	18.79	74.90	21.99	82.28	22.49	89.76	23.39	97.54	24.16	99.55	12.85
	-2	52.46	18.48	59.95	19.90	74.90	23.29	82.28	23.81	89.76	24.77	97.54	25.58	99.55	13.61
	0	52.46	19.17	59.95	20.64	74.90	24.16	82.28	24.70	89.76	25.70	97.54	26.54	99.55	14.12
	2	52.46	19.87	59.95	21.39	74.90	25.04	82.28	25.60	89.76	26.63	97.54	27.50	99.55	14.63
	4	52.46	20.57	59.95	22.15	74.90	25.92	82.28	26.50	89.76	27.57	97.54	28.47	99.55	15.15
	6	52.46	21.27	59.95	22.90	74.90	26.81	82.28	27.41	89.76	28.51	97.54	29.45	99.55	15.67
	8	52.46	21.98	59.95	23.67	74.90	27.70	82.28	28.32	89.76	29.46	97.54	30.43	99.55	16.19
	10	52.46	22.70	59.95	24.44	74.90	28.60	82.28	29.24	89.76	30.42	97.54	31.42	99.55	16.71
	12	52.46	23.42	59.95	25.21	74.90	29.51	82.28	30.17	89.76	31.38	97.54	32.41	99.55	17.24
	14	52.46	24.14	59.95	25.99	74.90	30.42	82.28	31.10	89.76	32.35	97.54	33.41	99.55	17.78
	16	52.46	24.87	59.95	26.77	74.90	31.34	82.28	32.04	89.76	33.33	97.54	34.42	99.55	18.31
	18	52.46	25.60	59.95	27.56	74.90	32.26	82.28	32.98	89.76	34.31	97.54	35.44	99.55	18.85
	20	52.46	26.34	59.95	28.36	74.90	33.19	82.28	33.93	89.76	35.30	97.54	36.46	99.55	19.39
	21	52.46	26.71	59.95	28.76	74.90	33.66	82.28	34.41	89.76	35.79	97.54	36.97	99.55	19.67
	23	52.46	27.45	59.95	29.56	74.90	34.59	82.28	35.37	89.76	36.79	97.54	38.00	99.55	20.22
	25	52.46	28.20	59.95	30.36	74.90	35.54	82.28	36.34	89.76	37.80	97.54	39.04	99.55	20.77
	27	52.46	28.96	59.95	31.18	74.90	36.49	82.28	37.31	89.76	38.81	97.54	40.08	99.55	21.32
	29	52.46	29.72	59.95	31.99	74.90	37.45	82.28	38.29	89.76	39.83	97.54	41.14	99.55	21.88
	31	52.46	30.48	59.95	32.82	74.90	38.41	82.28	39.27	89.36	40.67	97.54	42.19	99.55	22.45
	33	52.46	31.25	59.95	33.65	74.90	39.38	79.23	38.77	83.20	38.82	91.12	40.41	99.04	22.89
	35	52.46	32.03	59.95	34.48	73.11	39.39	74.80	37.51	77.03	36.84	84.37	38.34	91.71	21.72
	37	52.46	32.74	59.95	35.25	72.06	39.69	73.84	37.85	75.32	36.82	81.97	38.08	89.10	21.58
	39	52.46	33.45	59.84	35.95	70.79	39.84	71.32	37.36	73.55	36.74	80.55	38.24	87.55	21.67
41	52.35	34.10	59.73	36.66	68.16	39.19	68.81	36.82	72.25	36.86	79.13	38.37	86.01	21.74	
43	52.35	34.83	57.63	36.12	64.19	37.69	67.57	36.92	70.95	36.97	77.70	38.48	84.46	21.80	
46	50.45	34.27	56.38	36.08	63.01	37.77	66.33	37.01	69.65	37.05	76.28	38.57	82.91	21.85	
48	45.58	31.91	51.65	34.07	57.73	35.68	60.77	34.95	63.81	35.00	69.88	36.43	75.96	20.64	
50	42.80	30.57	48.50	32.64	54.21	34.18	57.06	33.48	59.91	33.52	65.62	34.90	71.33	19.77	
52	40.02	29.15	45.35	31.13	50.69	32.60	53.35	31.93	56.02	31.97	61.36	33.28	66.69	18.86	
55	37.24	27.66	42.20	29.54	47.16	30.93	49.65	30.30	52.13	30.34	57.09	31.58	62.06	17.89	
100%	-15	48.56	13.62	55.41	14.65	69.32	17.16	76.06	17.53	83.01	18.24	94.08	19.65	96.81	10.54
	-10	48.56	15.23	55.41	16.38	69.32	19.19	76.06	19.60	83.01	20.40	94.08	21.97	96.81	11.78
	-5	48.56	16.87	55.41	18.13	69.32	21.25	76.06	21.70	83.01	22.59	94.08	24.33	96.81	13.05
	-2	48.56	17.86	55.41	19.20	69.32	22.50	76.06	22.98	83.01	23.92	94.08	25.76	96.81	13.82
	0	48.56	18.53	55.41	19.92	69.32	23.35	76.06	23.84	83.01	24.81	94.08	26.72	96.81	14.33
	2	48.56	19.20	55.41	20.64	69.32	24.19	76.06	24.71	83.01	25.71	94.08	27.69	96.81	14.85
	4	48.56	19.88	55.41	21.37	69.32	25.04	76.06	25.58	83.01	26.62	94.08	28.67	96.81	15.38
	6	48.56	20.56	55.41	22.10	69.32	25.90	76.06	26.45	83.01	27.53	94.08	29.65	96.81	15.90
	8	48.56	21.24	55.41	22.84	69.32	26.77	76.06	27.34	83.01	28.45	94.08	30.64	96.81	16.44
	10	48.56	21.93	55.41	23.58	69.32	27.64	76.06	28.22	83.01	29.37	94.08	31.64	96.81	16.97
	12	48.56	22.63	55.41	24.33	69.32	28.51	76.06	29.12	83.01	30.30	94.08	32.64	96.81	17.51
	14	48.56	23.33	55.41	25.08	69.32	29.39	76.06	30.02	83.01	31.24	94.08	33.65	96.81	18.05
	16	48.56	24.03	55.41	25.84	69.32	30.28	76.06	30.92	83.01	32.18	94.08	34.66	96.81	18.59
	18	48.56	24.74	55.41	26.60	69.32	31.17	76.06	31.83	83.01	33.13	94.08	35.68	96.81	19.14
	20	48.56	25.45	55.41	27.36	69.32	32.07	76.06	32.75	83.01	34.08	94.08	36.71	96.81	19.69
	21	48.56	25.81	55.41	27.75	69.32	32.52	76.06	33.21	83.01	34.56	94.08	37.23	96.81	19.97
	23	48.56	26.53	55.41	28.52	69.32	33.43	76.06	34.14	83.01	35.53	94.08	38.27	96.81	20.52
	25	48.56	27.25	55.41	29.30	69.32	34.34	76.06	35.07	83.01	36.50	94.08	39.31	96.81	21.09
	27	48.56	27.98	55.41	30.09	69.32	35.26	76.06	36.01	83.01	37.47	94.08	40.36	96.81	21.65
	29	48.56	28.72	55.41	30.87	69.32	36.18	76.06	36.95	83.01	38.46	94.08	41.42	96.81	22.22
	31	48.56	29.46	55.41	31.67	69.32	37.11	76.06	37.90	83.01	39.44	94.08	42.49	96.81	22.79
	33	48.56	30.20	55.41	32.47	69.32	38.05	76.06	38.86	82.78	40.33	90.67	41.98	96.81	23.36
	35	48.56	30.95	55.41	33.27	69.32	38.99	73.00	38.22	76.65	38.27	83.95	39.83	91.25	22.57
	37	48.56	31.64	55.41	34.01	69.11	39.74	71.95	38.51	75.34	38.45	82.52	40.02	89.69	22.68
	39	48.56	32.33	55.41	34.76	69.11	40.61	70.79	38.71	74.03	38.61	81.08	40.19	88.13	22.77
41	48.56	33.02	55.41	35.50	66.58	39.97	69.26	38.69	72.72	38.74	79.65	40.33	86.58	22.85	
43	48.56	33.72	55.41	36.26	64.61	39.61	68.01	38.81	71.42	38.85	78.22	40.44	85.02	22.91	
46	48.56	34.43	55.41	37.02	63.43	39.70	66.77	38.89	70.11	38.94	76.78	40.53	83.46	22.96	
48	45.88	33.54	52.00	35.81	58.11	37.50	61.17	36.73	64.23	36.78	70.35	38.29	76.46	21.69	
50	43.08	32.13	48.82	34.31	54.57	35.92	57.44	35.19	60.31	35.23	66.06	36.68	71.80	20.78	
52	40.28	30.64	45.65	32.72	51.02	34.26	53.71	33.56	56.39	33.60	61.76	34.98	67.13	19.82	
55	37.48	29.07	42.48	31.04	47.48	32.50	49.98	31.84	52.47	31.88	57.47	33.19	62.47	18.80	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

# MDV8 ECO VRF 50Hz



Table2-8.10:26HP cooling capacity(continued)

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
90%	-15	44.36	12.06	49.94	12.79	62.25	14.94	68.58	15.32	74.69	15.90	87.22	17.65	93.02	9.81
	-10	44.36	13.48	49.94	14.30	62.25	16.70	68.58	17.12	74.69	17.78	87.22	19.74	93.02	10.97
	-5	44.36	14.93	49.94	15.84	62.25	18.50	68.58	18.96	74.69	19.69	87.22	21.86	93.02	12.15
	-2	44.36	15.81	49.94	16.77	62.25	19.59	68.58	20.08	74.69	20.85	87.22	23.15	93.02	12.87
	0	44.36	16.40	49.94	17.40	62.25	20.32	68.58	20.83	74.69	21.63	87.22	24.01	93.02	13.35
	2	44.36	17.00	49.94	18.03	62.25	21.06	68.58	21.59	74.69	22.42	87.22	24.88	93.02	13.83
	4	44.36	17.60	49.94	18.66	62.25	21.80	68.58	22.35	74.69	23.21	87.22	25.76	93.02	14.32
	6	44.36	18.20	49.94	19.30	62.25	22.54	68.58	23.11	74.69	24.00	87.22	26.64	93.02	14.81
	8	44.36	18.81	49.94	19.95	62.25	23.30	68.58	23.88	74.69	24.80	87.22	27.53	93.02	15.30
	10	44.36	19.42	49.94	20.59	62.25	24.05	68.58	24.66	74.69	25.61	87.22	28.42	93.02	15.80
	12	44.36	20.03	49.94	21.25	62.25	24.81	68.58	25.44	74.69	26.42	87.22	29.32	93.02	16.30
	14	44.36	20.65	49.94	21.90	62.25	25.58	68.58	26.23	74.69	27.24	87.22	30.23	93.02	16.80
	16	44.36	21.27	49.94	22.56	62.25	26.35	68.58	27.02	74.69	28.06	87.22	31.14	93.02	17.31
	18	44.36	21.90	49.94	23.23	62.25	27.13	68.58	27.81	74.69	28.88	87.22	32.06	93.02	17.82
	20	44.36	22.53	49.94	23.90	62.25	27.91	68.58	28.62	74.69	29.72	87.22	32.98	93.02	18.34
	21	44.36	22.85	49.94	24.23	62.25	28.30	68.58	29.02	74.69	30.13	87.22	33.45	93.02	18.59
	23	44.36	23.48	49.94	24.91	62.25	29.09	68.58	29.83	74.69	30.97	87.22	34.38	93.02	19.11
	25	44.36	24.13	49.94	25.59	62.25	29.89	68.58	30.64	74.69	31.82	87.22	35.32	93.02	19.63
	27	44.36	24.77	49.94	26.27	62.25	30.69	68.58	31.46	74.69	32.67	87.22	36.26	93.02	20.16
	29	44.36	25.42	49.94	26.96	62.25	31.49	68.58	32.29	74.69	33.53	87.22	37.21	93.02	20.69
	31	44.36	26.07	49.94	27.66	62.25	32.30	68.58	33.12	74.69	34.39	87.22	38.17	93.02	21.22
	33	44.36	26.73	49.94	28.36	62.25	33.12	68.58	33.95	74.69	35.26	87.22	39.14	93.02	21.76
	35	44.36	27.40	49.94	29.06	62.25	33.94	68.58	34.79	74.69	36.13	83.95	38.60	91.25	21.87
	37	44.36	28.00	49.94	29.70	62.25	34.69	68.58	35.57	72.05	35.63	78.91	37.09	85.77	21.01
	39	44.36	28.62	49.94	30.35	62.15	35.39	68.48	36.29	70.27	35.51	73.89	35.49	80.31	20.11
	41	44.36	29.23	49.94	31.01	62.15	36.16	65.84	35.64	67.94	35.08	72.58	35.61	78.89	20.18
	43	44.36	29.85	49.94	31.67	59.62	35.42	62.68	34.65	65.08	34.31	71.28	35.71	77.47	20.23
	46	44.36	30.48	49.94	32.33	57.80	35.05	60.84	34.34	63.89	34.38	69.97	35.79	76.05	20.28
	48	41.81	29.62	47.38	31.62	52.95	33.11	55.74	32.44	58.53	32.48	64.10	33.81	69.68	19.15
50	39.26	28.37	44.49	30.29	49.72	31.72	52.34	31.07	54.96	31.11	60.19	32.39	65.43	18.35	
52	36.71	27.06	41.60	28.89	46.49	30.25	48.94	29.63	51.39	29.67	56.28	30.89	61.18	17.50	
55	34.16	25.67	38.71	27.41	43.26	28.70	45.54	28.12	47.82	28.15	52.37	29.31	56.93	16.60	
80%	-15	39.40	10.33	45.09	11.14	55.41	12.83	60.99	13.14	66.47	13.66	77.53	15.14	87.86	8.94
	-10	39.40	11.55	45.09	12.46	55.41	14.34	60.99	14.69	66.47	15.27	77.53	16.93	87.86	10.00
	-5	39.40	12.79	45.09	13.79	55.41	15.88	60.99	16.27	66.47	16.91	77.53	18.74	87.86	11.07
	-2	39.40	13.55	45.09	14.61	55.41	16.82	60.99	17.23	66.47	17.90	77.53	19.85	87.86	11.72
	0	39.40	14.05	45.09	15.15	55.41	17.45	60.99	17.87	66.47	18.57	77.53	20.59	87.86	12.16
	2	39.40	14.56	45.09	15.70	55.41	18.08	60.99	18.52	66.47	19.25	77.53	21.34	87.86	12.60
	4	39.40	15.08	45.09	16.26	55.41	18.72	60.99	19.17	66.47	19.93	77.53	22.09	87.86	13.05
	6	39.40	15.59	45.09	16.81	55.41	19.36	60.99	19.83	66.47	20.61	77.53	22.84	87.86	13.49
	8	39.40	16.11	45.09	17.38	55.41	20.00	60.99	20.49	66.47	21.30	77.53	23.61	87.86	13.94
	10	39.40	16.64	45.09	17.94	55.41	20.65	60.99	21.16	66.47	21.99	77.53	24.37	87.86	14.40
	12	39.40	17.16	45.09	18.51	55.41	21.31	60.99	21.83	66.47	22.68	77.53	25.15	87.86	14.85
	14	39.40	17.70	45.09	19.08	55.41	21.96	60.99	22.50	66.47	23.38	77.53	25.92	87.86	15.31
	16	39.40	18.23	45.09	19.65	55.41	22.63	60.99	23.18	66.47	24.09	77.53	26.70	87.86	15.77
	18	39.40	18.77	45.09	20.23	55.41	23.29	60.99	23.86	66.47	24.80	77.53	27.49	87.86	16.24
	20	39.40	19.31	45.09	20.82	55.41	23.97	60.99	24.55	66.47	25.51	77.53	28.28	87.86	16.71
	21	39.40	19.58	45.09	21.11	55.41	24.30	60.99	24.90	66.47	25.87	77.53	28.68	87.86	16.94
	23	39.40	20.12	45.09	21.70	55.41	24.98	60.99	25.59	66.47	26.60	77.53	29.48	87.86	17.41
	25	39.40	20.67	45.09	22.29	55.41	25.66	60.99	26.29	66.47	27.32	77.53	30.29	87.86	17.89
	27	39.40	21.23	45.09	22.89	55.41	26.35	60.99	26.99	66.47	28.05	77.53	31.10	87.86	18.37
	29	39.40	21.78	45.09	23.49	55.41	27.04	60.99	27.70	66.47	28.79	77.53	31.91	87.86	18.85
	31	39.40	22.34	45.09	24.09	55.41	27.74	60.99	28.41	66.47	29.53	77.53	32.73	87.86	19.33
	33	39.40	22.91	45.09	24.70	55.41	28.44	60.99	29.13	66.47	30.27	77.53	33.56	87.86	19.82
	35	39.40	23.48	45.09	25.31	55.41	29.14	60.99	29.85	66.47	31.02	77.53	34.39	87.86	20.31
	37	39.40	24.00	45.09	25.87	55.41	29.79	60.99	30.52	66.47	31.71	77.53	35.15	85.77	20.27
	39	39.40	24.52	45.09	26.44	55.41	30.44	60.99	31.18	66.47	32.41	73.88	34.23	80.30	19.39
	41	39.40	25.05	45.09	27.01	55.41	31.09	60.78	31.75	64.15	31.95	68.84	32.58	74.82	18.46
	43	39.40	25.58	45.09	27.58	55.30	31.69	58.25	31.07	61.95	31.50	64.14	31.00	69.72	17.56
	46	39.40	26.12	45.09	28.16	52.56	30.75	55.73	30.35	57.49	29.85	62.96	31.07	68.44	17.60
	48	38.56	26.35	42.64	27.45	47.65	28.74	50.16	28.16	52.67	28.19	57.68	29.35	62.70	16.63
50	36.66	25.56	40.04	26.30	44.75	27.54	47.10	26.98	49.46	27.01	54.17	28.11	58.88	15.93	
52	33.03	23.49	37.43	25.08	41.84	26.26	44.04	25.73	46.24	25.76	50.65	26.81	55.05	15.19	
55	30.73	22.29	34.83	23.80	38.93	24.92	40.98	24.41	43.03	24.44	47.13	25.44	51.22	14.41	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

Table 2-8.10: 26HP cooling capacity (continued)

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
70%	-15	34.55	8.70	39.40	9.34	48.46	10.76	53.30	11.02	58.14	11.46	67.94	12.73	77.01	7.52
	-10	34.55	9.72	39.40	10.45	48.46	12.04	53.30	12.32	58.14	12.81	67.94	14.23	77.01	8.41
	-5	34.55	10.77	39.40	11.57	48.46	13.33	53.30	13.64	58.14	14.19	67.94	15.76	77.01	9.31
	-2	34.55	11.40	39.40	12.25	48.46	14.11	53.30	14.45	58.14	15.03	67.94	16.69	77.01	9.86
	0	34.55	11.83	39.40	12.71	48.46	14.64	53.30	14.99	58.14	15.59	67.94	17.31	77.01	10.23
	2	34.55	12.26	39.40	13.17	48.46	15.17	53.30	15.53	58.14	16.15	67.94	17.94	77.01	10.60
	4	34.55	12.69	39.40	13.63	48.46	15.71	53.30	16.08	58.14	16.72	67.94	18.57	77.01	10.97
	6	34.55	13.12	39.40	14.10	48.46	16.24	53.30	16.63	58.14	17.30	67.94	19.21	77.01	11.35
	8	34.55	13.56	39.40	14.57	48.46	16.79	53.30	17.19	58.14	17.87	67.94	19.85	77.01	11.73
	10	34.55	14.00	39.40	15.04	48.46	17.33	53.30	17.74	58.14	18.45	67.94	20.50	77.01	12.11
	12	34.55	14.44	39.40	15.52	48.46	17.88	53.30	18.30	58.14	19.04	67.94	21.15	77.01	12.49
	14	34.55	14.89	39.40	16.00	48.46	18.43	53.30	18.87	58.14	19.63	67.94	21.80	77.01	12.88
	16	34.55	15.34	39.40	16.48	48.46	18.99	53.30	19.44	58.14	20.22	67.94	22.46	77.01	13.27
	18	34.55	15.79	39.40	16.97	48.46	19.55	53.30	20.01	58.14	20.81	67.94	23.12	77.01	13.66
	20	34.55	16.25	39.40	17.45	48.46	20.11	53.30	20.59	58.14	21.41	67.94	23.78	77.01	14.05
	21	34.55	16.48	39.40	17.70	48.46	20.39	53.30	20.88	58.14	21.72	67.94	24.12	77.01	14.25
	23	34.55	16.93	39.40	18.19	48.46	20.96	53.30	21.46	58.14	22.32	67.94	24.79	77.01	14.65
	25	34.55	17.40	39.40	18.69	48.46	21.53	53.30	22.05	58.14	22.93	67.94	25.47	77.01	15.05
	27	34.55	17.86	39.40	19.19	48.46	22.11	53.30	22.64	58.14	23.54	67.94	26.15	77.01	15.45
	29	34.55	18.33	39.40	19.69	48.46	22.69	53.30	23.23	58.14	24.16	67.94	26.84	77.01	15.85
	31	34.55	18.80	39.40	20.20	48.46	23.27	53.30	23.83	58.14	24.78	67.94	27.53	77.01	16.26
	33	34.55	19.28	39.40	20.71	48.46	23.86	53.30	24.43	58.14	25.41	67.94	28.22	77.01	16.67
	35	34.55	19.76	39.40	21.22	48.46	24.45	53.30	25.03	58.14	26.04	67.94	28.92	77.01	17.09
	37	34.55	20.19	39.40	21.69	48.46	25.00	53.30	25.59	58.14	26.62	67.94	29.56	77.01	17.47
	39	34.55	20.64	39.40	22.17	48.46	25.54	53.30	26.15	58.14	27.20	67.94	30.21	77.01	17.85
	41	34.55	21.08	39.40	22.65	48.46	26.09	53.30	26.71	58.14	27.78	67.94	30.86	74.82	17.71
	43	34.55	21.53	39.40	23.13	48.46	26.65	53.30	27.28	58.14	28.37	63.80	29.59	69.35	16.77
	46	34.55	21.98	39.40	23.61	48.46	27.20	51.10	26.70	55.20	27.50	58.76	27.83	63.88	15.77
48	33.93	22.25	38.77	23.96	45.19	26.16	46.25	24.92	46.76	24.02	51.21	25.00	55.66	14.16	
50	32.03	21.43	35.50	22.37	39.63	23.40	41.72	22.93	43.80	22.95	47.97	23.89	52.14	13.54	
52	30.23	20.63	33.15	21.31	37.05	22.32	39.00	21.86	40.96	21.89	44.86	22.79	48.76	12.91	
55	27.22	18.94	30.85	20.22	34.48	21.17	36.29	20.74	38.11	20.77	41.74	21.62	45.37	12.25	
60%	-15	29.60	7.10	33.82	7.64	42.24	8.95	46.46	9.16	49.83	9.37	58.14	10.39	65.84	6.13
	-10	29.60	7.94	33.82	8.55	42.24	10.00	46.46	10.24	49.83	10.47	58.14	11.61	65.84	6.85
	-5	29.60	8.79	33.82	9.47	42.24	11.08	46.46	11.34	49.83	11.60	58.14	12.86	65.84	7.59
	-2	29.60	9.31	33.82	10.02	42.24	11.73	46.46	12.01	49.83	12.28	58.14	13.62	65.84	8.04
	0	29.60	9.66	33.82	10.40	42.24	12.17	46.46	12.46	49.83	12.74	58.14	14.13	65.84	8.34
	2	29.60	10.01	33.82	10.78	42.24	12.61	46.46	12.91	49.83	13.20	58.14	14.64	65.84	8.64
	4	29.60	10.36	33.82	11.15	42.24	13.05	46.46	13.36	49.83	13.66	58.14	15.15	65.84	8.94
	6	29.60	10.72	33.82	11.54	42.24	13.50	46.46	13.82	49.83	14.13	58.14	15.67	65.84	9.25
	8	29.60	11.07	33.82	11.92	42.24	13.95	46.46	14.28	49.83	14.60	58.14	16.20	65.84	9.56
	10	29.60	11.43	33.82	12.31	42.24	14.40	46.46	14.75	49.83	15.08	58.14	16.72	65.84	9.87
	12	29.60	6.49	33.82	6.99	42.24	8.18	46.46	8.37	49.83	8.56	58.14	9.50	65.84	10.18
	14	29.60	6.69	33.82	7.21	42.24	8.43	46.46	8.63	49.83	8.83	58.14	9.79	65.84	10.50
	16	29.60	6.90	33.82	7.42	42.24	8.69	46.46	8.89	49.83	9.09	58.14	10.08	65.84	10.81
	18	29.60	7.10	33.82	7.64	42.24	8.94	46.46	9.15	49.83	9.36	58.14	10.38	65.84	11.13
	20	29.60	7.30	33.82	7.86	42.24	9.20	46.46	9.42	49.83	9.63	58.14	10.68	65.84	11.45
	21	29.60	7.41	33.82	7.97	42.24	9.33	46.46	9.55	49.83	9.77	58.14	10.83	65.84	11.61
	23	29.60	7.61	33.82	8.19	42.24	9.59	46.46	9.82	49.83	10.04	58.14	11.13	65.84	11.94
	25	29.60	7.82	33.82	8.42	42.24	9.85	46.46	10.08	49.83	10.31	58.14	11.44	65.84	12.26
	27	29.60	8.03	33.82	8.64	42.24	10.11	46.46	10.35	49.83	10.59	58.14	11.74	65.84	12.59
	29	29.60	8.24	33.82	8.87	42.24	10.38	46.46	10.63	49.83	10.87	58.14	12.05	65.84	12.92
	31	29.60	8.45	33.82	9.10	42.24	10.65	46.46	10.90	49.83	11.15	58.14	12.36	65.84	13.26
	33	29.60	8.67	33.82	9.33	42.24	10.92	46.46	11.17	49.83	11.43	58.14	12.67	65.84	13.59
	35	29.60	8.88	33.82	9.56	42.24	11.19	46.46	11.45	49.83	11.71	58.14	12.99	65.84	13.93
	37	29.60	9.08	33.82	9.77	42.24	11.43	46.46	11.71	49.83	11.97	58.14	13.28	65.84	14.24
	39	29.60	9.28	33.82	9.99	42.24	11.68	46.46	11.96	49.83	12.23	58.14	13.57	65.84	14.55
	41	29.60	9.48	33.82	10.20	42.24	11.94	46.46	12.22	49.83	12.50	58.14	13.86	65.84	14.86
	43	29.60	9.68	33.82	10.42	42.24	12.19	46.46	12.48	49.83	12.76	58.14	14.15	65.84	15.18
	46	29.60	9.88	33.82	10.64	42.24	12.45	46.46	12.74	49.83	13.03	58.14	14.45	63.88	15.03
48	29.60	10.19	33.82	10.96	42.24	12.83	44.53	12.59	46.76	12.60	51.21	13.12	55.66	13.50	
50	29.60	10.39	33.82	11.19	38.14	11.82	40.15	11.58	42.16	11.59	46.17	12.07	50.19	12.42	
52	27.07	9.70	30.40	10.26	33.98	10.74	35.77	10.52	37.56	10.53	41.14	10.97	44.71	11.29	
55	23.61	8.62	26.76	9.21	29.91	9.64	31.48	9.44	33.06	9.46	36.21	9.84	39.36	10.13	

Abbreviations:  
 CR: Combination ratio  
 TC: Total capacity (kW)  
 PI: Power input (compressor + outdoor fan motor) (kW)  
 Notes:  
 Shaded cells indicate rating condition.

Table continued on next page ...

# MDV8 ECO VRF 50Hz



Table2-8.10:26HP cooling capacity(continued)

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
50%	-15	24.65	3.08	28.13	3.31	35.18	3.88	38.77	3.98	42.24	4.13	48.46	4.51	54.99	4.84
	-10	24.65	3.44	28.13	3.70	35.18	4.34	38.77	4.45	42.24	4.62	48.46	5.04	54.99	5.42
	-5	24.65	3.81	28.13	4.10	35.18	4.80	38.77	4.93	42.24	5.12	48.46	5.58	54.99	6.00
	-2	24.65	4.04	28.13	4.34	35.18	5.09	38.77	5.22	42.24	5.42	48.46	5.91	54.99	6.35
	0	24.65	4.19	28.13	4.50	35.18	5.28	38.77	5.41	42.24	5.62	48.46	6.13	54.99	6.59
	2	24.65	4.34	28.13	4.67	35.18	5.47	38.77	5.61	42.24	5.83	48.46	6.35	54.99	6.83
	4	24.65	4.49	28.13	4.83	35.18	5.66	38.77	5.81	42.24	6.03	48.46	6.58	54.99	7.07
	6	24.65	4.65	28.13	5.00	35.18	5.85	38.77	6.01	42.24	6.24	48.46	6.80	54.99	7.31
	8	24.65	4.80	28.13	5.16	35.18	6.05	38.77	6.21	42.24	6.45	48.46	7.03	54.99	7.55
	10	24.65	4.96	28.13	5.33	35.18	6.25	38.77	6.41	42.24	6.66	48.46	7.26	54.99	7.80
	12	24.65	5.12	28.13	5.50	35.18	6.44	38.77	6.61	42.24	6.87	48.46	7.49	54.99	8.05
	14	24.65	5.27	28.13	5.67	35.18	6.64	38.77	6.81	42.24	7.08	48.46	7.72	54.99	8.29
	16	24.65	5.43	28.13	5.84	35.18	6.84	38.77	7.02	42.24	7.29	48.46	7.95	54.99	8.54
	18	24.65	5.59	28.13	6.01	35.18	7.05	38.77	7.23	42.24	7.51	48.46	8.19	54.99	8.80
	20	24.65	5.75	28.13	6.19	35.18	7.25	38.77	7.44	42.24	7.72	48.46	8.42	54.99	9.05
	21	24.65	5.84	28.13	6.27	35.18	7.35	38.77	7.54	42.24	7.83	48.46	8.54	54.99	9.18
	23	24.65	6.00	28.13	6.45	35.18	7.56	38.77	7.75	42.24	8.05	48.46	8.78	54.99	9.43
	25	24.65	6.16	28.13	6.62	35.18	7.76	38.77	7.96	42.24	8.27	48.46	9.02	54.99	9.69
	27	24.65	6.33	28.13	6.80	35.18	7.97	38.77	8.17	42.24	8.49	48.46	9.26	54.99	9.95
	29	24.65	6.49	28.13	6.98	35.18	8.18	38.77	8.39	42.24	8.71	48.46	9.50	54.99	10.21
	31	24.65	6.66	28.13	7.16	35.18	8.39	38.77	8.60	42.24	8.94	48.46	9.75	54.99	10.47
	33	24.65	6.83	28.13	7.34	35.18	8.60	38.77	8.82	42.24	9.16	48.46	9.99	54.99	10.74
	35	24.65	7.00	28.13	7.52	35.18	8.81	38.77	9.04	42.24	9.39	48.46	10.24	54.99	11.00
37	24.65	7.15	28.13	7.69	35.18	9.01	38.77	9.24	42.24	9.60	48.46	10.47	54.99	11.25	
39	24.65	7.31	28.13	7.86	35.18	9.21	38.77	9.44	42.24	9.81	48.46	10.70	54.99	11.49	
41	24.65	7.47	28.13	8.03	35.18	9.40	38.77	9.65	42.24	10.02	48.46	10.93	54.99	11.74	
43	24.65	7.62	28.13	8.20	35.18	9.60	38.77	9.85	42.24	10.23	48.46	11.16	54.99	11.99	
46	24.65	7.78	28.13	8.37	35.18	9.81	38.77	10.06	42.24	10.45	48.46	11.39	54.99	12.24	
48	24.65	8.03	28.13	8.63	35.18	10.11	38.77	10.37	42.24	10.77	48.46	11.74	54.99	12.62	
50	24.65	8.19	28.13	8.80	35.18	10.31	38.77	10.58	42.16	10.97	46.17	11.42	50.19	11.75	
52	24.65	8.35	28.13	8.98	33.98	10.16	35.77	9.95	37.56	9.97	41.14	10.37	44.71	10.68	
55	23.54	8.13	26.68	8.68	29.82	9.09	31.39	8.91	32.96	8.92	36.10	9.28	39.24	9.56	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table 2-8.11: 28HP cooling capacity

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
130%	-15	62.92	11.03	71.94	11.88	88.22	13.64	97.02	13.97	106.03	14.55	113.89	14.86	117.86	10.78
	-10	62.92	12.58	71.94	13.55	88.22	15.57	97.02	15.93	106.03	16.60	113.89	16.95	117.86	12.29
	-5	62.92	14.16	71.94	15.25	88.22	17.52	97.02	17.93	106.03	18.69	113.89	19.08	117.86	13.83
	-2	62.92	15.11	71.94	16.28	88.22	18.71	97.02	19.15	106.03	19.95	113.89	20.37	117.86	14.77
	0	62.92	15.76	71.94	16.98	88.22	19.50	97.02	19.96	106.03	20.80	113.89	21.24	117.86	15.40
	2	62.92	16.41	71.94	17.67	88.22	20.31	97.02	20.78	106.03	21.66	113.89	22.11	117.86	16.04
	4	62.92	17.06	71.94	18.38	88.22	21.11	97.02	21.61	106.03	22.52	113.89	22.99	117.86	16.67
	6	62.92	17.72	71.94	19.09	88.22	21.93	97.02	22.44	106.03	23.39	113.89	23.88	117.86	17.32
	8	62.92	18.38	71.94	19.80	88.22	22.75	97.02	23.28	106.03	24.26	113.89	24.77	117.86	17.96
	10	62.92	19.05	71.94	20.52	88.22	23.57	97.02	24.12	106.03	25.14	113.89	25.66	117.86	18.61
	12	62.92	19.72	71.94	21.24	88.22	24.40	97.02	24.97	106.03	26.02	113.89	26.57	117.86	19.27
	14	62.92	20.39	71.94	21.96	88.22	25.23	97.02	25.83	106.03	26.91	113.89	27.48	117.86	19.93
	16	62.92	21.07	71.94	22.70	88.22	26.07	97.02	26.69	106.03	27.81	113.89	28.39	117.86	20.59
	18	62.92	21.75	71.94	23.43	88.22	26.92	97.02	27.55	106.03	28.71	113.89	29.31	117.86	21.26
	20	62.92	22.44	71.94	24.17	88.22	27.77	97.02	28.42	106.03	29.62	113.89	30.24	117.86	21.93
	21	62.92	22.79	71.94	24.54	88.22	28.20	97.02	28.86	106.03	30.08	113.89	30.70	117.86	22.27
	23	62.92	23.48	71.94	25.29	88.22	29.06	97.02	29.74	106.03	30.99	113.89	31.64	117.86	22.95
	25	62.92	24.18	71.94	26.05	88.22	29.92	97.02	30.63	106.03	31.92	113.89	32.58	117.86	23.63
	27	62.92	24.88	71.94	26.80	88.22	30.79	97.02	31.52	106.03	32.84	113.89	33.53	117.86	24.32
	29	62.92	25.59	71.94	27.57	88.22	31.67	97.02	32.41	106.03	33.78	113.89	34.48	117.86	25.01
	31	62.92	26.30	71.94	28.33	88.22	32.55	97.02	33.32	103.45	33.88	113.31	35.26	117.86	25.71
	33	62.92	27.02	71.94	29.11	87.15	33.03	91.73	32.36	96.32	32.40	105.49	33.73	114.66	25.69
	35	62.92	27.74	71.94	29.88	84.36	32.83	86.35	31.28	89.18	30.80	97.68	32.06	106.17	24.42
	37	62.92	28.40	70.42	29.95	82.96	33.05	85.07	31.54	86.93	30.74	94.94	31.90	103.20	24.30
	39	61.63	28.47	70.54	30.70	80.14	32.67	81.90	31.08	84.99	30.75	93.09	32.01	101.18	24.38
	41	61.75	29.18	70.54	31.40	77.21	32.20	79.33	30.79	83.30	30.83	91.23	32.09	99.16	24.45
	43	61.86	29.89	67.14	30.56	73.83	31.49	77.72	30.85	81.60	30.88	89.38	32.15	97.15	24.49
	46	58.23	28.76	64.69	30.10	72.30	31.52	76.11	30.88	79.91	30.91	87.52	32.18	95.13	24.51
	48	51.33	26.19	58.18	27.96	65.02	29.28	68.44	28.68	71.87	28.72	78.71	29.89	85.56	22.77
50	47.50	24.75	53.84	26.43	60.17	27.67	63.34	27.11	66.50	27.14	72.84	28.25	79.17	21.52	
52	43.67	23.23	49.50	24.81	55.32	25.98	58.23	25.45	61.14	25.48	66.96	26.52	72.79	20.20	
55	39.84	21.64	45.15	23.10	50.47	24.19	53.12	23.70	55.78	23.73	61.09	24.70	66.40	18.81	
120%	-15	59.05	10.79	67.49	11.61	83.07	13.39	91.15	13.68	99.48	14.23	111.78	15.20	113.89	10.85
	-10	59.05	12.30	67.49	13.25	83.07	15.28	91.15	15.60	99.48	16.24	111.78	17.34	113.89	12.38
	-5	59.05	13.85	67.49	14.91	83.07	17.19	91.15	17.56	99.48	18.27	111.78	19.52	113.89	13.93
	-2	59.05	14.79	67.49	15.92	83.07	18.36	91.15	18.75	99.48	19.51	111.78	20.84	113.89	14.88
	0	59.05	15.42	67.49	16.60	83.07	19.14	91.15	19.55	99.48	20.34	111.78	21.73	113.89	15.51
	2	59.05	16.05	67.49	17.28	83.07	19.93	91.15	20.35	99.48	21.18	111.78	22.62	113.89	16.15
	4	59.05	16.69	67.49	17.97	83.07	20.72	91.15	21.16	99.48	22.02	111.78	23.52	113.89	16.79
	6	59.05	17.33	67.49	18.66	83.07	21.52	91.15	21.98	99.48	22.87	111.78	24.43	113.89	17.44
	8	59.05	17.98	67.49	19.36	83.07	22.32	91.15	22.80	99.48	23.73	111.78	25.34	113.89	18.09
	10	59.05	18.63	67.49	20.06	83.07	23.13	91.15	23.62	99.48	24.59	111.78	26.26	113.89	18.75
	12	59.05	19.29	67.49	20.77	83.07	23.95	91.15	24.46	99.48	25.45	111.78	27.18	113.89	19.41
	14	59.05	19.95	67.49	21.48	83.07	24.77	91.15	25.29	99.48	26.32	111.78	28.11	113.89	20.07
	16	59.05	20.61	67.49	22.19	83.07	25.59	91.15	26.13	99.48	27.20	111.78	29.05	113.89	20.74
	18	59.05	21.28	67.49	22.91	83.07	26.42	91.15	26.98	99.48	28.08	111.78	29.99	113.89	21.41
	20	59.05	21.95	67.49	23.64	83.07	27.26	91.15	27.83	99.48	28.97	111.78	30.94	113.89	22.09
	21	59.05	22.29	67.49	24.00	83.07	27.68	91.15	28.26	99.48	29.41	111.78	31.41	113.89	22.43
	23	59.05	22.97	67.49	24.73	83.07	28.52	91.15	29.12	99.48	30.31	111.78	32.37	113.89	23.11
	25	59.05	23.65	67.49	25.47	83.07	29.37	91.15	29.99	99.48	31.21	111.78	33.33	113.89	23.80
	27	59.05	24.34	67.49	26.21	83.07	30.22	91.15	30.86	99.48	32.12	111.78	34.30	113.89	24.49
	29	59.05	25.03	67.49	26.96	83.07	31.08	91.15	31.74	99.48	33.03	111.78	35.28	113.89	25.19
	31	59.05	25.73	67.49	27.71	83.07	31.95	91.15	32.63	99.48	33.95	110.27	35.77	113.89	25.89
33	59.05	26.43	67.49	28.46	83.07	32.82	89.27	32.83	93.74	32.87	102.66	34.21	111.59	26.06	
35	59.05	27.14	67.49	29.22	82.84	33.60	84.83	32.03	86.79	31.25	95.06	32.52	103.33	24.78	
37	59.05	27.78	67.49	29.92	81.78	33.96	83.54	32.29	85.42	31.48	91.94	32.20	99.94	24.53	
39	59.05	28.43	67.49	30.61	79.09	33.61	80.61	31.88	82.37	31.06	90.15	32.31	97.99	24.61	
41	57.99	28.56	66.20	30.72	76.27	33.15	77.68	31.43	80.67	31.12	88.35	32.39	96.03	24.68	
43	57.99	29.21	64.33	30.52	71.50	31.78	75.26	31.14	79.03	31.18	86.55	32.45	94.08	24.72	
46	56.35	29.01	62.65	30.39	70.02	31.82	73.70	31.17	77.39	31.21	84.76	32.48	92.13	24.74	
48	50.62	26.92	56.34	28.22	62.97	29.55	66.28	28.95	69.60	28.99	76.23	30.17	82.85	22.99	
50	46.00	24.98	52.14	26.68	58.27	27.93	61.34	27.36	64.40	27.40	70.54	28.52	76.67	21.73	
52	42.29	23.45	47.93	25.04	53.57	26.22	56.39	25.69	59.21	25.72	64.85	26.77	70.49	20.39	
55	38.58	21.84	43.73	23.32	48.87	24.42	51.45	23.92	54.02	23.95	59.16	24.93	64.31	18.99	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

# MDV8 ECO VRF 50Hz



Table2-8.11:28HP cooling capacity(continued)

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
110%	-15	55.06	10.51	62.92	11.31	77.56	13.07	85.07	13.34	93.03	13.91	108.03	15.35	111.43	11.10
	-10	55.06	11.99	62.92	12.91	77.56	14.91	85.07	15.22	93.03	15.87	108.03	17.51	111.43	12.66
	-5	55.06	13.49	62.92	14.53	77.56	16.77	85.07	17.12	93.03	17.86	108.03	19.71	111.43	14.25
	-2	55.06	14.41	62.92	15.51	77.56	17.91	85.07	18.28	93.03	19.07	108.03	21.04	111.43	15.21
	0	55.06	15.02	62.92	16.17	77.56	18.67	85.07	19.06	93.03	19.88	108.03	21.94	111.43	15.86
	2	55.06	15.64	62.92	16.84	77.56	19.44	85.07	19.85	93.03	20.70	108.03	22.84	111.43	16.51
	4	55.06	16.26	62.92	17.51	77.56	20.22	85.07	20.64	93.03	21.52	108.03	23.75	111.43	17.17
	6	55.06	16.89	62.92	18.18	77.56	21.00	85.07	21.43	93.03	22.35	108.03	24.67	111.43	17.83
	8	55.06	17.52	62.92	18.86	77.56	21.78	85.07	22.23	93.03	23.18	108.03	25.59	111.43	18.50
	10	55.06	18.15	62.92	19.54	77.56	22.57	85.07	23.04	93.03	24.02	108.03	26.51	111.43	19.17
	12	55.06	18.79	62.92	20.23	77.56	23.36	85.07	23.85	93.03	24.87	108.03	27.45	111.43	19.84
	14	55.06	19.43	62.92	20.92	77.56	24.16	85.07	24.66	93.03	25.72	108.03	28.39	111.43	20.52
	16	55.06	20.08	62.92	21.62	77.56	24.97	85.07	25.49	93.03	26.58	108.03	29.33	111.43	21.20
	18	55.06	20.73	62.92	22.32	77.56	25.78	85.07	26.31	93.03	27.44	108.03	30.28	111.43	21.89
	20	55.06	21.39	62.92	23.03	77.56	26.59	85.07	27.14	93.03	28.31	108.03	31.24	111.43	22.58
	21	55.06	21.72	62.92	23.38	77.56	27.00	85.07	27.56	93.03	28.74	108.03	31.72	111.43	22.93
	23	55.06	22.38	62.92	24.09	77.56	27.82	85.07	28.40	93.03	29.62	108.03	32.69	111.43	23.63
	25	55.06	23.04	62.92	24.81	77.56	28.65	85.07	29.25	93.03	30.50	108.03	33.66	111.43	24.33
	27	55.06	23.72	62.92	25.53	77.56	29.49	85.07	30.10	93.03	31.39	108.03	34.64	111.43	25.04
	29	55.06	24.39	62.92	26.26	77.56	30.32	85.07	30.96	93.03	32.28	108.03	35.63	111.43	25.75
	31	55.06	25.07	62.92	26.99	77.56	31.17	85.07	31.82	93.03	33.18	105.24	35.67	111.43	26.47
	33	55.06	25.75	62.92	27.73	77.56	32.02	85.07	32.69	89.46	32.78	97.98	34.12	106.50	25.99
	35	55.06	26.44	62.92	28.47	77.21	32.73	83.19	32.82	84.95	31.95	90.73	32.44	98.62	24.71
	37	55.06	27.07	62.92	29.14	77.21	33.50	81.90	33.07	83.78	32.26	87.96	32.19	95.61	24.52
	39	55.06	27.70	62.92	29.82	77.21	34.28	79.44	32.83	80.85	31.86	86.24	32.30	93.74	24.61
	41	55.06	28.34	62.92	30.51	74.16	33.69	76.51	32.34	78.03	31.45	84.53	32.38	91.88	24.67
	43	54.02	28.43	61.75	30.61	70.42	32.71	72.01	31.13	75.61	31.16	82.81	32.44	90.01	24.71
46	54.02	29.06	59.94	30.37	66.99	31.80	70.51	31.16	74.04	31.20	81.09	32.47	88.14	24.74	
48	49.91	27.73	53.90	28.22	60.24	29.54	63.41	28.94	66.59	28.98	72.93	30.16	79.27	22.98	
50	44.01	24.98	49.88	26.67	55.75	27.92	58.68	27.36	61.62	27.39	67.49	28.51	73.35	21.72	
52	40.46	23.45	45.86	25.03	51.25	26.21	53.95	25.68	56.65	25.71	62.04	26.76	67.44	20.39	
55	36.91	21.83	41.84	23.31	46.76	24.41	49.22	23.91	51.68	23.94	56.60	24.92	61.52	18.99	
100%	-15	50.97	10.19	58.23	10.97	71.70	12.65	78.62	12.91	85.77	13.43	100.18	14.91	107.79	11.24
	-10	50.97	11.62	58.23	12.51	71.70	14.43	78.62	14.73	85.77	15.32	100.18	17.01	107.79	12.83
	-5	50.97	13.08	58.23	14.08	71.70	16.24	78.62	16.58	85.77	17.24	100.18	19.14	107.79	14.43
	-2	50.97	13.97	58.23	15.04	71.70	17.34	78.62	17.70	85.77	18.41	100.18	20.44	107.79	15.41
	0	50.97	14.56	58.23	15.68	71.70	18.08	78.62	18.45	85.77	19.20	100.18	21.31	107.79	16.07
	2	50.97	15.16	58.23	16.32	71.70	18.83	78.62	19.21	85.77	19.99	100.18	22.19	107.79	16.73
	4	50.97	15.77	58.23	16.97	71.70	19.58	78.62	19.98	85.77	20.78	100.18	23.07	107.79	17.40
	6	50.97	16.37	58.23	17.62	71.70	20.33	78.62	20.75	85.77	21.58	100.18	23.96	107.79	18.07
	8	50.97	16.99	58.23	18.28	71.70	21.09	78.62	21.52	85.77	22.39	100.18	24.85	107.79	18.74
	10	50.97	17.60	58.23	18.95	71.70	21.85	78.62	22.30	85.77	23.20	100.18	25.76	107.79	19.42
	12	50.97	18.22	58.23	19.61	71.70	22.62	78.62	23.09	85.77	24.02	100.18	26.66	107.79	20.10
	14	50.97	18.84	58.23	20.28	71.70	23.40	78.62	23.88	85.77	24.84	100.18	27.57	107.79	20.79
	16	50.97	19.47	58.23	20.96	71.70	24.18	78.62	24.67	85.77	25.67	100.18	28.49	107.79	21.48
	18	50.97	20.10	58.23	21.64	71.70	24.96	78.62	25.47	85.77	26.50	100.18	29.42	107.79	22.18
	20	50.97	20.74	58.23	22.32	71.70	25.75	78.62	26.28	85.77	27.34	100.18	30.35	107.79	22.88
	21	50.97	21.06	58.23	22.67	71.70	26.15	78.62	26.68	85.77	27.76	100.18	30.81	107.79	23.23
	23	50.97	21.70	58.23	23.36	71.70	26.94	78.62	27.50	85.77	28.60	100.18	31.75	107.79	23.94
	25	50.97	22.35	58.23	24.05	71.70	27.75	78.62	28.31	85.77	29.45	100.18	32.70	107.79	24.66
	27	50.97	23.00	58.23	24.75	71.70	28.55	78.62	29.14	85.77	30.31	100.18	33.65	107.79	25.37
	29	50.97	23.65	58.23	25.46	71.70	29.36	78.62	29.97	85.77	31.17	100.18	34.61	107.79	26.09
	31	50.97	24.31	58.23	26.16	71.70	30.18	78.62	30.80	85.77	32.04	100.18	35.57	107.79	26.82
	33	50.97	24.97	58.23	26.88	71.70	31.01	78.62	31.64	85.77	32.92	97.50	35.56	105.98	27.09
	35	50.97	25.64	58.23	27.60	71.70	31.83	78.50	32.44	82.96	32.69	90.27	33.81	98.13	25.75
	37	50.97	26.25	58.23	28.25	71.70	32.59	78.62	33.26	81.78	32.99	88.55	33.95	96.24	25.86
	39	50.97	26.86	58.23	28.91	71.70	33.35	78.50	33.98	79.56	32.84	86.82	34.06	94.36	25.94
41	50.97	27.48	58.23	29.57	71.35	33.95	75.57	33.46	77.69	32.80	85.09	34.15	92.48	26.01	
43	50.97	28.10	58.23	30.24	68.86	33.50	72.48	32.82	76.11	32.86	83.36	34.21	90.60	26.06	
46	50.97	28.72	58.23	30.91	67.43	33.54	70.98	32.85	74.53	32.89	81.63	34.24	88.72	26.08	
48	47.88	27.86	54.26	29.75	60.64	31.15	63.83	30.52	67.03	30.55	73.41	31.81	79.79	24.23	
50	44.30	26.34	50.21	28.12	56.12	29.44	59.07	28.84	62.02	28.88	67.93	30.06	73.84	22.90	
52	40.73	24.72	46.16	26.40	51.59	27.64	54.31	27.08	57.02	27.11	62.45	28.22	67.88	21.50	
55	37.16	23.02	42.11	24.58	47.07	25.74	49.54	25.22	52.02	25.25	56.98	26.28	61.93	20.02	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

*Table 2-8.11: 28HP cooling capacity(continued)*

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
90%	-15	45.81	8.86	52.38	9.55	65.50	11.18	71.35	11.34	77.45	11.73	89.98	12.96	102.99	10.39
	-10	45.81	10.11	52.38	10.89	65.50	12.76	71.35	12.93	77.45	13.39	89.98	14.78	102.99	11.86
	-5	45.81	11.38	52.38	12.25	65.50	14.36	71.35	14.56	77.45	15.07	89.98	16.64	102.99	13.34
	-2	45.81	12.15	52.38	13.09	65.50	15.33	71.35	15.54	77.45	16.09	89.98	17.76	102.99	14.25
	0	45.81	12.66	52.38	13.64	65.50	15.98	71.35	16.20	77.45	16.77	89.98	18.52	102.99	14.86
	2	45.81	13.19	52.38	14.20	65.50	16.64	71.35	16.87	77.45	17.46	89.98	19.28	102.99	15.47
	4	45.81	13.71	52.38	14.77	65.50	17.30	71.35	17.54	77.45	18.16	89.98	20.05	102.99	16.08
	6	45.81	14.24	52.38	15.34	65.50	17.97	71.35	18.22	77.45	18.86	89.98	20.82	102.99	16.70
	8	45.81	14.77	52.38	15.91	65.50	18.64	71.35	18.90	77.45	19.56	89.98	21.60	102.99	17.33
	10	45.81	15.31	52.38	16.49	65.50	19.32	71.35	19.58	77.45	20.27	89.98	22.38	102.99	17.95
	12	45.81	15.84	52.38	17.07	65.50	20.00	71.35	20.27	77.45	20.98	89.98	23.17	102.99	18.58
	14	45.81	16.39	52.38	17.65	65.50	20.68	71.35	20.97	77.45	21.70	89.98	23.96	102.99	19.22
	16	45.81	16.93	52.38	18.24	65.50	21.37	71.35	21.66	77.45	22.42	89.98	24.76	102.99	19.86
	18	45.81	17.48	52.38	18.83	65.50	22.06	71.35	22.37	77.45	23.15	89.98	25.56	102.99	20.50
	20	45.81	18.03	52.38	19.43	65.50	22.76	71.35	23.07	77.45	23.88	89.98	26.37	102.99	21.15
	21	45.81	18.31	52.38	19.73	65.50	23.11	71.35	23.43	77.45	24.25	89.98	26.78	102.99	21.48
	23	45.81	18.87	52.38	20.33	65.50	23.81	71.35	24.14	77.45	24.99	89.98	27.59	102.99	22.13
	25	45.81	19.43	52.38	20.93	65.50	24.52	71.35	24.86	77.45	25.73	89.98	28.41	102.99	22.79
	27	45.81	20.00	52.38	21.54	65.50	25.24	71.35	25.58	77.45	26.48	89.98	29.24	102.99	23.45
	29	45.81	20.57	52.38	22.15	65.50	25.95	71.35	26.31	77.45	27.23	89.98	30.07	102.99	24.12
	31	45.81	21.14	52.38	22.77	65.50	26.68	71.35	27.05	77.45	27.99	89.98	30.91	102.99	24.79
	33	45.81	21.71	52.38	23.39	65.50	27.40	71.35	27.78	77.45	28.76	89.98	31.75	102.99	25.47
	35	45.81	22.30	52.38	24.02	65.50	28.14	71.35	28.53	77.45	29.53	89.98	32.60	98.13	24.92
	37	45.81	22.82	52.38	24.59	65.50	28.80	71.35	29.20	77.45	30.23	84.86	31.48	92.24	23.98
	39	45.81	23.36	52.38	25.16	65.50	29.48	70.65	29.59	77.09	30.79	80.26	30.46	86.35	22.97
	41	45.81	23.89	52.38	25.74	64.21	29.56	70.65	30.27	74.28	30.34	77.68	30.16	84.28	22.93
	43	45.81	24.43	52.38	26.32	64.21	30.22	67.84	29.72	70.65	29.51	75.96	30.16	82.56	22.97
46	45.81	24.97	52.38	26.90	61.45	29.57	64.68	28.97	67.91	29.00	74.38	30.19	80.85	23.00	
48	43.63	24.56	49.44	26.23	55.26	27.46	58.17	26.91	61.08	26.94	66.89	28.04	72.71	21.36	
50	40.89	23.52	45.75	24.79	51.14	25.96	53.83	25.43	56.52	25.46	61.90	26.50	67.29	20.19	
52	37.12	21.80	42.06	23.27	47.01	24.37	49.49	23.87	51.96	23.90	56.91	24.88	61.86	18.95	
55	33.86	20.30	38.38	21.67	42.89	22.69	45.15	22.23	47.41	22.26	51.92	23.17	56.43	17.65	
80%	-15	40.77	7.59	46.63	8.18	58.23	9.57	64.09	9.81	69.84	10.19	80.03	11.10	92.44	8.98
	-10	40.77	8.66	46.63	9.33	58.23	10.92	64.09	11.19	69.84	11.62	80.03	12.66	92.44	10.25
	-5	40.77	9.75	46.63	10.50	58.23	12.29	64.09	12.59	69.84	13.08	80.03	14.25	92.44	11.53
	-2	40.77	10.41	46.63	11.22	58.23	13.12	64.09	13.44	69.84	13.97	80.03	15.21	92.44	12.31
	0	40.77	10.85	46.63	11.69	58.23	13.68	64.09	14.01	69.84	14.56	80.03	15.86	92.44	12.84
	2	40.77	11.30	46.63	12.18	58.23	14.24	64.09	14.59	69.84	15.16	80.03	16.51	92.44	13.37
	4	40.77	11.75	46.63	12.66	58.23	14.81	64.09	15.17	69.84	15.77	80.03	17.17	92.44	13.90
	6	40.77	12.20	46.63	13.15	58.23	15.38	64.09	15.76	69.84	16.37	80.03	17.83	92.44	14.43
	8	40.77	12.66	46.63	13.64	58.23	15.96	64.09	16.34	69.84	16.98	80.03	18.50	92.44	14.97
	10	40.77	13.12	46.63	14.13	58.23	16.53	64.09	16.94	69.84	17.60	80.03	19.17	92.44	15.52
	12	40.77	13.58	46.63	14.63	58.23	17.12	64.09	17.53	69.84	18.22	80.03	19.84	92.44	16.06
	14	40.77	14.04	46.63	15.13	58.23	17.70	64.09	18.13	69.84	18.84	80.03	20.52	92.44	16.61
	16	40.77	14.51	46.63	15.63	58.23	18.29	64.09	18.74	69.84	19.47	80.03	21.20	92.44	17.16
	18	40.77	14.98	46.63	16.14	58.23	18.88	64.09	19.34	69.84	20.10	80.03	21.89	92.44	17.72
	20	40.77	15.45	46.63	16.65	58.23	19.48	64.09	19.96	69.84	20.74	80.03	22.58	92.44	18.28
	21	40.77	15.69	46.63	16.91	58.23	19.78	64.09	20.26	69.84	21.05	80.03	22.93	92.44	18.56
	23	40.77	16.17	46.63	17.42	58.23	20.38	64.09	20.88	69.84	21.70	80.03	23.63	92.44	19.13
	25	40.77	16.65	46.63	17.94	58.23	20.99	64.09	21.50	69.84	22.34	80.03	24.33	92.44	19.70
	27	40.77	17.14	46.63	18.46	58.23	21.60	64.09	22.13	69.84	22.99	80.03	25.04	92.44	20.27
	29	40.77	17.62	46.63	18.99	58.23	22.22	64.09	22.76	69.84	23.65	80.03	25.75	92.44	20.85
	31	40.77	18.11	46.63	19.52	58.23	22.84	64.09	23.39	69.84	24.31	80.03	26.47	92.44	21.43
	33	40.77	18.61	46.63	20.05	58.23	23.46	64.09	24.03	69.84	24.97	80.03	27.19	92.44	22.01
	35	40.77	19.11	46.63	20.59	58.23	24.08	64.09	24.67	69.84	25.64	80.03	27.92	92.44	22.60
	37	40.77	19.56	46.63	21.08	58.23	24.66	64.09	25.26	69.84	26.24	80.03	28.58	92.24	23.09
	39	40.77	20.01	46.63	21.57	58.23	25.23	64.09	25.85	69.84	26.86	80.03	29.25	86.35	22.12
	41	40.77	20.47	46.63	22.06	58.23	25.81	64.09	26.44	68.55	26.96	76.39	28.56	80.46	21.08
	43	40.77	20.94	46.63	22.56	57.17	25.91	62.92	26.54	65.62	26.39	71.12	27.19	74.57	19.98
46	40.77	21.40	46.63	23.06	56.70	26.27	59.75	25.76	62.80	25.82	66.93	26.16	72.75	19.92	
48	39.95	21.66	44.52	22.74	51.44	24.62	52.34	23.31	54.96	23.34	60.20	24.30	65.43	18.51	
50	37.73	20.89	41.17	21.48	46.02	22.49	48.44	22.03	50.86	22.06	55.70	22.96	60.55	17.49	
52	33.98	19.21	37.85	20.16	42.31	21.11	44.53	20.68	46.76	20.71	51.21	21.56	55.67	16.42	
55	30.47	17.59	34.53	18.78	38.60	19.66	40.63	19.26	42.66	19.29	46.72	20.08	50.78	15.29	

**Abbreviations:**

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

**Notes:**

Shaded cells indicate rating condition.

*Table continued on next page ...*

# MDV8 ECO VRF 50Hz



Table 2-8.11: 28HP cooling capacity (continued)

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/W D)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC KW	PI KW	TC KW	PI KW	TC KW	PI KW	TC KW	PI KW	TC KW	PI KW	TC KW	PI KW	TC KW	PI KW
70%	-15	35.62	6.35	40.77	6.85	50.97	8.02	56.00	8.20	61.16	8.54	71.00	9.42	80.03	7.45
	-10	35.62	7.25	40.77	7.81	50.97	9.15	56.00	9.36	61.16	9.74	71.00	10.75	80.03	8.49
	-5	35.62	8.15	40.77	8.79	50.97	10.30	56.00	10.53	61.16	10.97	71.00	12.10	80.03	9.56
	-2	35.62	8.71	40.77	9.39	50.97	11.00	56.00	11.24	61.16	11.71	71.00	12.92	80.03	10.21
	0	35.62	9.08	40.77	9.79	50.97	11.47	56.00	11.72	61.16	12.21	71.00	13.47	80.03	10.64
	2	35.62	9.45	40.77	10.19	50.97	11.94	56.00	12.21	61.16	12.71	71.00	14.03	80.03	11.08
	4	35.62	9.83	40.77	10.60	50.97	12.41	56.00	12.69	61.16	13.22	71.00	14.58	80.03	11.52
	6	35.62	10.21	40.77	11.01	50.97	12.89	56.00	13.18	61.16	13.73	71.00	15.15	80.03	11.96
	8	35.62	10.59	40.77	11.42	50.97	13.37	56.00	13.67	61.16	14.24	71.00	15.71	80.03	12.41
	10	35.62	10.97	40.77	11.83	50.97	13.86	56.00	14.17	61.16	14.76	71.00	16.28	80.03	12.86
	12	35.62	11.36	40.77	12.25	50.97	14.34	56.00	14.67	61.16	15.27	71.00	16.85	80.03	13.31
	14	35.62	11.75	40.77	12.67	50.97	14.83	56.00	15.17	61.16	15.80	71.00	17.43	80.03	13.77
	16	35.62	12.14	40.77	13.09	50.97	15.33	56.00	15.67	61.16	16.32	71.00	18.01	80.03	14.23
	18	35.62	12.53	40.77	13.51	50.97	15.83	56.00	16.18	61.16	16.85	71.00	18.59	80.03	14.69
	20	35.62	12.93	40.77	13.94	50.97	16.33	56.00	16.69	61.16	17.38	71.00	19.18	80.03	15.15
	21	35.62	13.13	40.77	14.15	50.97	16.58	56.00	16.95	61.16	17.65	71.00	19.48	80.03	15.39
	23	35.62	13.53	40.77	14.59	50.97	17.08	56.00	17.47	61.16	18.19	71.00	20.07	80.03	15.85
	25	35.62	13.93	40.77	15.02	50.97	17.59	56.00	17.99	61.16	18.73	71.00	20.67	80.03	16.33
	27	35.62	14.33	40.77	15.46	50.97	18.10	56.00	18.51	61.16	19.28	71.00	21.27	80.03	16.80
	29	35.62	14.74	40.77	15.90	50.97	18.62	56.00	19.04	61.16	19.83	71.00	21.87	80.03	17.28
	31	35.62	15.15	40.77	16.34	50.97	19.14	56.00	19.57	61.16	20.38	71.00	22.48	80.03	17.76
	33	35.62	15.56	40.77	16.78	50.97	19.66	56.00	20.10	61.16	20.93	71.00	23.10	80.03	18.25
35	35.62	15.98	40.77	17.23	50.97	20.18	56.00	20.64	61.16	21.49	71.00	23.71	80.03	18.73	
37	35.62	16.36	40.77	17.64	50.97	20.66	56.00	21.13	61.16	22.00	71.00	24.28	80.03	19.18	
39	35.62	16.74	40.77	18.05	50.97	21.14	56.00	21.62	61.16	22.52	71.00	24.84	80.03	19.62	
41	35.62	17.13	40.77	18.47	50.97	21.63	56.00	22.12	61.16	23.03	71.00	25.41	80.03	20.07	
43	35.62	17.51	40.77	18.88	50.97	22.12	56.00	22.62	61.16	23.55	68.61	25.11	74.57	19.13	
46	35.62	17.90	40.77	19.30	50.97	22.61	54.95	22.68	57.70	22.71	63.50	23.76	68.69	18.01	
48	35.62	18.49	40.70	19.90	46.28	21.20	51.44	21.93	51.79	21.06	55.07	21.28	59.86	16.21	
50	35.04	18.58	37.85	18.91	42.76	20.01	43.47	18.93	45.33	18.83	49.65	19.60	53.97	14.93	
52	32.81	17.76	34.33	17.51	37.47	17.90	39.44	17.54	41.41	17.56	45.36	18.28	49.30	13.92	
55	26.99	14.91	30.58	15.92	34.18	16.67	35.98	16.33	37.78	16.35	41.38	17.02	44.98	12.97	
60%	-15	30.58	5.18	34.92	5.58	43.70	6.54	48.04	6.69	52.38	6.96	61.16	7.72	68.78	6.08
	-10	30.58	5.91	34.92	6.36	43.70	7.46	48.04	7.63	52.38	7.94	61.16	8.81	68.78	6.94
	-5	30.58	6.66	34.92	7.16	43.70	8.40	48.04	8.59	52.38	8.93	61.16	9.91	68.78	7.81
	-2	30.58	7.11	34.92	7.65	43.70	8.96	48.04	9.17	52.38	9.54	61.16	10.58	68.78	8.34
	0	30.58	7.41	34.92	7.97	43.70	9.35	48.04	9.56	52.38	9.94	61.16	11.03	68.78	8.70
	2	30.58	7.72	34.92	8.30	43.70	9.73	48.04	9.96	52.38	10.35	61.16	11.49	68.78	9.05
	4	30.58	8.02	34.92	8.63	43.70	10.12	48.04	10.35	52.38	10.76	61.16	11.94	68.78	9.41
	6	30.58	8.33	34.92	8.96	43.70	10.51	48.04	10.75	52.38	11.18	61.16	12.40	68.78	9.78
	8	30.58	8.64	34.92	9.30	43.70	10.90	48.04	11.15	52.38	11.60	61.16	12.87	68.78	10.14
	10	30.58	8.96	34.92	9.63	43.70	11.30	48.04	11.56	52.38	12.02	61.16	13.33	68.78	10.51
	12	30.58	8.86	34.92	7.38	43.70	8.65	48.04	8.85	52.38	9.20	61.16	10.22	68.78	10.88
	14	30.58	7.10	34.92	7.63	43.70	8.95	48.04	9.16	52.38	9.52	61.16	10.56	68.78	11.25
	16	30.58	7.33	34.92	7.89	43.70	9.25	48.04	9.46	52.38	9.84	61.16	10.92	68.78	11.63
	18	30.58	7.57	34.92	8.14	43.70	9.55	48.04	9.77	52.38	10.16	61.16	11.27	68.78	12.00
	20	30.58	7.81	34.92	8.40	43.70	9.85	48.04	10.08	52.38	10.48	61.16	11.63	68.78	12.38
	21	30.58	7.93	34.92	8.53	43.70	10.00	48.04	10.23	52.38	10.64	61.16	11.81	68.78	12.57
	23	30.58	8.17	34.92	8.79	43.70	10.31	48.04	10.54	52.38	10.96	61.16	12.17	68.78	12.96
	25	30.58	8.41	34.92	9.05	43.70	10.61	48.04	10.86	52.38	11.29	61.16	12.53	68.78	13.34
	27	30.58	8.66	34.92	9.32	43.70	10.92	48.04	11.17	52.38	11.62	61.16	12.89	68.78	13.73
	29	30.58	8.91	34.92	9.58	43.70	11.23	48.04	11.49	52.38	11.95	61.16	13.26	68.78	14.12
	31	30.58	9.15	34.92	9.85	43.70	11.54	48.04	11.81	52.38	12.28	61.16	13.63	68.78	14.51
	33	30.58	9.40	34.92	10.12	43.70	11.86	48.04	12.13	52.38	12.62	61.16	14.00	68.78	14.91
35	30.58	9.65	34.92	10.39	43.70	12.18	48.04	12.46	52.38	12.95	61.16	14.37	68.78	15.31	
37	30.58	9.88	34.92	10.63	43.70	12.47	48.04	12.75	52.38	13.26	61.16	14.72	68.78	15.67	
39	30.58	10.11	34.92	10.88	43.70	12.76	48.04	13.05	52.38	13.57	61.16	15.06	68.78	16.04	
41	30.58	10.35	34.92	11.13	43.70	13.05	48.04	13.35	52.38	13.88	61.16	15.40	68.78	16.40	
43	30.58	10.58	34.92	11.38	43.70	13.34	48.04	13.65	52.38	14.19	61.16	15.75	68.78	16.77	
46	30.58	10.81	34.92	11.63	43.70	13.64	48.04	13.96	52.38	14.51	61.16	16.10	68.69	17.12	
48	30.58	11.17	34.92	12.02	43.70	14.09	47.89	14.37	50.28	14.38	55.07	14.97	59.86	15.41	
50	30.58	11.41	34.92	12.27	41.02	13.51	43.18	13.23	45.33	13.25	49.65	13.79	53.97	14.19	
52	28.85	10.99	32.70	11.73	36.54	12.29	38.47	12.04	40.39	12.05	44.23	12.54	48.08	12.91	
55	25.77	10.02	28.69	10.51	32.07	11.01	33.76	10.78	35.44	10.79	38.82	11.24	42.19	11.57	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...



Table 2-8.11: 28HP cooling capacity (continued)

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
50%	-15	25.42	3.01	29.06	3.24	36.44	3.80	40.07	3.89	43.70	4.05	50.97	4.49	58.23	4.86
	-10	25.42	3.43	29.06	3.69	36.44	4.34	40.07	4.44	43.70	4.62	50.97	5.12	58.23	5.54
	-5	25.42	3.86	29.06	4.16	36.44	4.88	40.07	5.00	43.70	5.20	50.97	5.76	58.23	6.23
	-2	25.42	4.12	29.06	4.44	36.44	5.22	40.07	5.34	43.70	5.55	50.97	6.15	58.23	6.66
	0	25.42	4.30	29.06	4.63	36.44	5.44	40.07	5.57	43.70	5.79	50.97	6.42	58.23	6.94
	2	25.42	4.47	29.06	4.82	36.44	5.66	40.07	5.79	43.70	6.03	50.97	6.68	58.23	7.23
	4	25.42	4.65	29.06	5.01	36.44	5.89	40.07	6.03	43.70	6.27	50.97	6.95	58.23	7.51
	6	25.42	4.83	29.06	5.20	36.44	6.11	40.07	6.26	43.70	6.51	50.97	7.21	58.23	7.80
	8	25.42	5.01	29.06	5.40	36.44	6.34	40.07	6.49	43.70	6.75	50.97	7.48	58.23	8.09
	10	25.42	5.19	29.06	5.59	36.44	6.57	40.07	6.73	43.70	6.99	50.97	7.75	58.23	8.39
	12	25.42	5.38	29.06	5.79	36.44	6.80	40.07	6.96	43.70	7.24	50.97	8.03	58.23	8.68
	14	25.42	5.56	29.06	5.99	36.44	7.04	40.07	7.20	43.70	7.49	50.97	8.30	58.23	8.98
	16	25.42	5.75	29.06	6.19	36.44	7.27	40.07	7.44	43.70	7.74	50.97	8.58	58.23	9.28
	18	25.42	5.93	29.06	6.39	36.44	7.51	40.07	7.68	43.70	7.99	50.97	8.86	58.23	9.58
	20	25.42	6.12	29.06	6.59	36.44	7.74	40.07	7.92	43.70	8.24	50.97	9.14	58.23	9.88
	21	25.42	6.21	29.06	6.69	36.44	7.86	40.07	8.05	43.70	8.37	50.97	9.28	58.23	10.04
	23	25.42	6.40	29.06	6.90	36.44	8.10	40.07	8.29	43.70	8.62	50.97	9.56	58.23	10.34
	25	25.42	6.59	29.06	7.10	36.44	8.34	40.07	8.54	43.70	8.88	50.97	9.84	58.23	10.65
	27	25.42	6.79	29.06	7.31	36.44	8.59	40.07	8.79	43.70	9.14	50.97	10.13	58.23	10.96
	29	25.42	6.98	29.06	7.52	36.44	8.83	40.07	9.04	43.70	9.40	50.97	10.42	58.23	11.27
	31	25.42	7.17	29.06	7.73	36.44	9.08	40.07	9.29	43.70	9.66	50.97	10.71	58.23	11.58
	33	25.42	7.37	29.06	7.94	36.44	9.32	40.07	9.54	43.70	9.92	50.97	11.00	58.23	11.90
	35	25.42	7.57	29.06	8.15	36.44	9.57	40.07	9.80	43.70	10.19	50.97	11.29	58.23	12.22
37	25.42	7.75	29.06	8.34	36.44	9.80	40.07	10.03	43.70	10.43	50.97	11.56	58.23	12.51	
39	25.42	7.93	29.06	8.54	36.44	10.03	40.07	10.26	43.70	10.67	50.97	11.83	58.23	12.80	
41	25.42	8.11	29.06	8.73	36.44	10.26	40.07	10.50	43.70	10.92	50.97	12.10	58.23	13.09	
43	25.42	8.29	29.06	8.93	36.44	10.49	40.07	10.74	43.70	11.16	50.97	12.38	58.23	13.39	
46	25.42	8.48	29.06	9.13	36.44	10.72	40.07	10.97	43.70	11.41	50.97	12.65	58.23	13.69	
48	25.42	8.75	29.06	9.43	36.44	11.08	40.07	11.34	43.70	11.79	50.97	13.07	58.23	14.14	
50	25.42	8.94	29.06	9.63	36.44	11.31	40.07	11.58	43.70	12.04	49.65	13.00	53.97	13.38	
52	25.42	9.13	29.06	9.83	36.44	11.55	38.47	11.35	40.39	11.36	44.23	11.83	48.08	12.17	
55	25.32	9.28	28.69	9.91	32.07	10.38	33.76	10.17	35.44	10.18	38.82	10.59	42.19	10.90	

**Abbreviations:**

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

**Notes:**

Shaded cells indicate rating condition.

# MDV8 ECO VRF 50Hz



Table 2-8.12: 30HP cooling capacity

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)														
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24		
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	
130%	-15	68.12	11.65	77.85	12.54	95.55	14.42	105.17	14.77	115.13	15.42	120.52	15.34	123.80	10.76	
	-10	68.12	13.58	77.85	14.62	95.55	16.81	105.17	17.22	115.13	17.98	120.52	17.89	123.80	12.55	
	-5	68.12	15.54	77.85	16.74	95.55	19.24	105.17	19.71	115.13	20.58	120.52	20.47	123.80	14.36	
	-2	68.12	16.74	77.85	18.02	95.55	20.72	105.17	21.23	115.13	22.16	120.52	22.05	123.80	15.47	
	0	68.12	17.54	77.85	18.89	95.55	21.72	105.17	22.25	115.13	23.22	120.52	23.10	123.80	16.21	
	2	68.12	18.35	77.85	19.76	95.55	22.72	105.17	23.27	115.13	24.29	120.52	24.17	123.80	16.95	
	4	68.12	19.16	77.85	20.63	95.55	23.72	105.17	24.30	115.13	25.37	120.52	25.24	123.80	17.70	
	6	68.12	19.98	77.85	21.51	95.55	24.74	105.17	25.34	115.13	26.45	120.52	26.32	123.80	18.46	
	8	68.12	20.80	77.85	22.40	95.55	25.76	105.17	26.38	115.13	27.54	120.52	27.40	123.80	19.22	
	10	68.12	21.63	77.85	23.29	95.55	26.78	105.17	27.44	115.13	28.64	120.52	28.49	123.80	19.99	
	12	68.12	22.47	77.85	24.19	95.55	27.82	105.17	28.49	115.13	29.74	120.52	29.59	123.80	20.76	
	14	68.12	23.31	77.85	25.09	95.55	28.86	105.17	29.56	115.13	30.85	120.52	30.70	123.80	21.53	
	16	68.12	24.15	77.85	26.00	95.55	29.90	105.17	30.63	115.13	31.97	120.52	31.81	123.80	22.32	
	18	68.12	25.00	77.85	26.92	95.55	30.96	105.17	31.71	115.13	33.10	120.52	32.93	123.80	23.10	
	20	68.12	25.86	77.85	27.84	95.55	32.02	105.17	32.80	115.13	34.23	120.52	34.06	123.80	23.89	
	21	68.12	26.29	77.85	28.31	95.55	32.55	105.17	33.34	115.13	34.80	120.52	34.63	123.80	24.29	
	23	68.12	27.15	77.85	29.24	95.55	33.62	105.17	34.44	115.13	35.95	120.52	35.77	123.80	25.09	
	25	68.12	28.03	77.85	30.17	95.55	34.70	105.17	35.54	115.13	37.10	120.52	36.91	123.80	25.89	
	27	68.12	28.90	77.85	31.12	95.55	35.78	105.17	36.65	115.13	38.26	120.52	38.07	123.80	26.70	
	29	68.12	29.78	77.85	32.07	95.55	36.87	105.17	37.77	115.13	39.43	120.52	39.23	123.80	27.52	
	31	68.12	30.67	77.85	33.02	95.55	37.97	105.17	38.90	112.02	39.51	120.52	40.40	123.80	28.34	
	33	68.12	31.56	77.85	33.98	94.36	38.59	99.33	37.81	104.29	37.85	114.23	39.40	123.80	29.16	
	35	68.12	32.46	77.85	34.95	89.80	37.77	92.27	36.12	96.57	36.05	105.77	37.52	114.96	27.85	
	37	68.12	33.21	76.32	35.05	88.40	38.04	90.74	36.34	94.03	35.90	102.99	37.38	111.94	27.74	
	39	66.83	33.31	76.32	35.84	86.64	38.12	88.87	36.39	92.37	36.06	101.16	37.54	109.96	27.87	
	41	66.71	33.99	76.56	36.75	83.59	37.59	86.38	36.16	90.70	36.20	99.34	37.68	107.98	27.97	
	43	66.94	34.85	73.86	36.23	80.56	37.02	84.80	36.27	89.04	36.31	97.52	37.80	106.00	28.06	
	46	65.06	34.60	70.73	35.44	79.05	37.11	83.21	36.36	87.37	36.40	95.69	37.89	104.01	28.13	
	48	57.02	31.29	64.62	33.41	72.22	34.99	76.02	34.27	79.82	34.32	87.42	35.72	95.03	26.52	
	50	53.42	29.93	60.54	31.96	67.67	33.46	71.23	32.78	74.79	32.82	81.91	34.16	89.03	25.36	
	52	49.82	28.49	56.47	30.41	63.11	31.85	66.43	31.20	69.75	31.24	76.40	32.52	83.04	24.14	
	55	46.23	26.96	52.39	28.79	58.56	30.14	61.64	29.53	64.72	29.57	70.89	30.78	77.05	22.85	
	120%	-15	64.01	11.39	73.16	12.26	89.92	14.12	100.48	14.69	107.62	15.00	118.06	15.64	120.63	10.91
		-10	64.01	13.28	73.16	14.30	89.92	16.46	100.48	17.12	107.62	17.49	118.06	18.23	120.63	12.72
-5		64.01	15.20	73.16	16.37	89.92	18.85	100.48	19.60	107.62	20.02	118.06	20.87	120.63	14.56	
-2		64.01	16.37	73.16	17.63	89.92	20.29	100.48	21.11	107.62	21.56	118.06	22.47	120.63	15.68	
0		64.01	17.15	73.16	18.47	89.92	21.27	100.48	22.12	107.62	22.59	118.06	23.55	120.63	16.43	
2		64.01	17.94	73.16	19.32	89.92	22.25	100.48	23.14	107.62	23.63	118.06	24.64	120.63	17.19	
4		64.01	18.74	73.16	20.18	89.92	23.23	100.48	24.16	107.62	24.68	118.06	25.73	120.63	17.95	
6		64.01	19.54	73.16	21.04	89.92	24.23	100.48	25.19	107.62	25.73	118.06	26.83	120.63	18.72	
8		64.01	20.34	73.16	21.91	89.92	25.22	100.48	26.23	107.62	26.79	118.06	27.93	120.63	19.49	
10		64.01	21.15	73.16	22.78	89.92	26.23	100.48	27.28	107.62	27.86	118.06	29.05	120.63	20.27	
12		64.01	21.97	73.16	23.66	89.92	27.24	100.48	28.33	107.62	28.93	118.06	30.17	120.63	21.05	
14		64.01	22.79	73.16	24.54	89.92	28.26	100.48	29.39	107.62	30.02	118.06	31.30	120.63	21.84	
16		64.01	23.62	73.16	25.43	89.92	29.28	100.48	30.46	107.62	31.10	118.06	32.43	120.63	22.63	
18		64.01	24.45	73.16	26.33	89.92	30.32	100.48	31.53	107.62	32.20	118.06	33.57	120.63	23.43	
20		64.01	25.29	73.16	27.23	89.92	31.35	100.48	32.61	107.62	33.30	118.06	34.72	120.63	24.23	
21		64.01	25.71	73.16	27.68	89.92	31.88	100.48	33.15	107.62	33.86	118.06	35.30	120.63	24.63	
23		64.01	26.55	73.16	28.59	89.92	32.92	100.48	34.24	107.62	34.97	118.06	36.46	120.63	25.44	
25		64.01	27.41	73.16	29.51	89.92	33.98	100.48	35.34	107.62	36.09	118.06	37.63	120.63	26.26	
27		64.01	28.26	73.16	30.43	89.92	35.04	100.48	36.44	107.62	37.22	118.06	38.81	120.63	27.08	
29		64.01	29.12	73.16	31.36	89.92	36.11	100.48	37.56	107.62	38.36	118.06	39.99	120.63	27.90	
31		64.01	29.99	73.16	32.30	89.92	37.19	100.48	38.68	107.62	39.50	118.06	41.18	120.63	28.74	
33		64.01	30.87	73.16	33.24	89.92	38.27	96.67	38.29	101.50	38.34	111.17	39.91	120.63	29.57	
35		64.01	31.75	73.16	34.18	88.28	38.64	90.39	36.82	93.98	36.51	102.93	38.00	111.88	28.21	
37		64.01	32.47	73.16	34.97	86.87	38.90	88.98	37.08	91.22	36.25	99.74	37.67	108.41	27.96	
39		63.89	33.14	73.16	35.76	85.35	39.08	87.34	37.22	89.57	36.40	97.97	37.84	106.49	28.08	
41		62.84	33.32	71.63	35.79	82.18	38.46	83.94	36.56	87.84	36.48	96.20	37.98	104.57	28.19	
43		62.84	34.05	71.75	36.63	78.01	37.31	82.12	36.55	86.23	36.60	94.44	38.10	102.65	28.28	
46		62.72	34.72	68.50	35.72	76.56	37.40	80.58	36.64	84.61	36.69	92.67	38.19	100.73	28.35	
48		55.22	31.54	62.58	33.67	69.94	35.26	73.62	34.54	77.30	34.58	84.66	36.00	92.03	26.72	
50	51.73	30.16	58.63	32.21	65.53	33.72	68.98	33.04	72.43	33.08	79.33	34.43	86.22	25.56		
52	48.25	28.71	54.69	30.65	61.12	32.10	64.34	31.44	67.55	31.48	73.99	32.77	80.42	24.33		
55	44.77	27.17	50.74	29.02	56.71	30.38	59.69	29.76	62.68	29.80	68.65	31.02	74.62	23.03		

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

Table2-8.12:30HP cooling capacity(continued)

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
110%	-15	59.68	11.08	68.23	11.93	83.83	13.73	92.15	14.05	100.59	14.62	115.13	15.91	117.83	11.12
	-10	59.68	12.92	68.23	13.91	83.83	16.01	92.15	16.38	100.59	17.05	115.13	18.55	117.83	12.96
	-5	59.68	14.78	68.23	15.92	83.83	18.33	92.15	18.75	100.59	19.52	115.13	21.23	117.83	14.84
	-2	59.68	15.92	68.23	17.15	83.83	19.74	92.15	20.19	100.59	21.02	115.13	22.86	117.83	15.98
	0	59.68	16.68	68.23	17.97	83.83	20.68	92.15	21.16	100.59	22.03	115.13	23.96	117.83	16.75
	2	59.68	17.45	68.23	18.80	83.83	21.64	92.15	22.14	100.59	23.04	115.13	25.06	117.83	17.52
	4	59.68	18.22	68.23	19.63	83.83	22.60	92.15	23.12	100.59	24.06	115.13	26.17	117.83	18.29
	6	59.68	19.00	68.23	20.47	83.83	23.56	92.15	24.10	100.59	25.09	115.13	27.29	117.83	19.07
	8	59.68	19.79	68.23	21.31	83.83	24.53	92.15	25.10	100.59	26.12	115.13	28.42	117.83	19.86
	10	59.68	20.58	68.23	22.16	83.83	25.51	92.15	26.10	100.59	27.16	115.13	29.55	117.83	20.65
	12	59.68	21.37	68.23	23.02	83.83	26.49	92.15	27.10	100.59	28.21	115.13	30.69	117.83	21.45
	14	59.68	22.17	68.23	23.88	83.83	27.48	92.15	28.12	100.59	29.27	115.13	31.84	117.83	22.25
	16	59.68	22.97	68.23	24.74	83.83	28.48	92.15	29.14	100.59	30.33	115.13	32.99	117.83	23.06
	18	59.68	23.78	68.23	25.61	83.83	29.48	92.15	30.16	100.59	31.40	115.13	34.15	117.83	23.87
	20	59.68	24.60	68.23	26.49	83.83	30.49	92.15	31.20	100.59	32.47	115.13	35.32	117.83	24.69
	21	59.68	25.00	68.23	26.93	83.83	31.00	92.15	31.72	100.59	33.01	115.13	35.91	117.83	25.10
	23	59.68	25.83	68.23	27.82	83.83	32.02	92.15	32.76	100.59	34.10	115.13	37.09	117.83	25.92
	25	59.68	26.66	68.23	28.71	83.83	33.05	92.15	33.81	100.59	35.19	115.13	38.28	117.83	26.76
	27	59.68	27.49	68.23	29.61	83.83	34.08	92.15	34.87	100.59	36.29	115.13	39.48	117.83	27.59
	29	59.68	28.33	68.23	30.51	83.83	35.12	92.15	35.93	100.59	37.40	115.13	40.68	117.83	28.43
	31	59.68	29.17	68.23	31.42	83.83	36.17	92.15	37.00	100.59	38.51	113.96	41.47	117.83	29.28
	33	59.68	30.02	68.23	32.34	83.83	37.22	92.15	38.08	96.87	38.17	106.10	39.73	115.32	29.49
	35	59.68	30.88	68.23	33.26	83.59	38.17	88.63	37.67	90.51	36.68	98.24	37.84	106.78	28.09
	37	59.68	31.58	68.23	34.02	83.59	39.05	87.11	37.87	88.98	36.89	95.42	37.59	103.72	27.91
	39	59.68	32.30	68.23	34.79	83.59	39.93	85.70	38.10	87.58	37.12	93.73	37.76	101.88	28.03
	41	59.68	33.01	68.23	35.56	80.66	39.38	82.54	37.51	84.06	36.42	92.04	37.90	100.04	28.14
43	59.68	33.74	66.94	35.65	74.64	37.24	78.57	36.48	82.49	36.53	90.35	38.02	98.21	28.22	
46	58.50	33.78	65.53	35.65	73.24	37.33	77.10	36.57	80.95	36.61	88.66	38.11	96.37	28.29	
48	52.83	31.48	59.87	33.61	66.91	35.19	70.43	34.47	73.96	34.52	81.00	35.93	88.04	26.67	
50	49.49	30.10	56.09	32.14	62.69	33.66	65.99	32.97	69.29	33.01	75.89	34.36	82.49	25.51	
52	46.16	28.65	52.32	30.59	58.47	32.03	61.55	31.38	64.63	31.42	70.78	32.71	76.94	24.28	
55	42.83	27.12	48.54	28.96	54.25	30.32	57.11	29.70	59.96	29.74	65.68	30.96	71.39	22.98	
100%	-15	55.10	10.69	63.08	11.54	78.32	13.42	85.35	13.61	92.85	14.12	108.33	15.65	114.43	11.29
	-10	55.10	12.47	63.08	13.45	78.32	15.64	85.35	15.87	92.85	16.46	108.33	18.25	114.43	13.17
	-5	55.10	14.27	63.08	15.40	78.32	17.91	85.35	18.16	92.85	18.84	108.33	20.89	114.43	15.07
	-2	55.10	15.37	63.08	16.58	78.32	19.28	85.35	19.56	92.85	20.29	108.33	22.50	114.43	16.23
	0	55.10	16.11	63.08	17.37	78.32	20.21	85.35	20.50	92.85	21.26	108.33	23.58	114.43	17.01
	2	55.10	16.85	63.08	18.17	78.32	21.14	85.35	21.44	92.85	22.24	108.33	24.66	114.43	17.79
	4	55.10	17.60	63.08	18.98	78.32	22.08	85.35	22.39	92.85	23.23	108.33	25.76	114.43	18.58
	6	55.10	18.35	63.08	19.79	78.32	23.02	85.35	23.35	92.85	24.22	108.33	26.86	114.43	19.37
	8	55.10	19.10	63.08	20.61	78.32	23.97	85.35	24.31	92.85	25.22	108.33	27.96	114.43	20.17
	10	55.10	19.87	63.08	21.43	78.32	24.92	85.35	25.28	92.85	26.22	108.33	29.08	114.43	20.97
	12	55.10	20.63	63.08	22.25	78.32	25.88	85.35	26.25	92.85	27.23	108.33	30.20	114.43	21.78
	14	55.10	21.40	63.08	23.09	78.32	26.85	85.35	27.23	92.85	28.25	108.33	31.33	114.43	22.60
	16	55.10	22.18	63.08	23.92	78.32	27.83	85.35	28.22	92.85	29.28	108.33	32.46	114.43	23.42
	18	55.10	22.96	63.08	24.77	78.32	28.81	85.35	29.22	92.85	30.31	108.33	33.61	114.43	24.24
	20	55.10	23.75	63.08	25.61	78.32	29.79	85.35	30.22	92.85	31.35	108.33	34.76	114.43	25.07
	21	55.10	24.14	63.08	26.04	78.32	30.29	85.35	30.72	92.85	31.87	108.33	35.34	114.43	25.49
	23	55.10	24.94	63.08	26.90	78.32	31.29	85.35	31.73	92.85	32.91	108.33	36.50	114.43	26.33
	25	55.10	25.74	63.08	27.76	78.32	32.29	85.35	32.75	92.85	33.97	108.33	37.67	114.43	27.17
	27	55.10	26.54	63.08	28.63	78.32	33.30	85.35	33.77	92.85	35.03	108.33	38.85	114.43	28.02
	29	55.10	27.35	63.08	29.50	78.32	34.31	85.35	34.80	92.85	36.10	108.33	40.03	114.43	28.88
	31	55.10	28.17	63.08	30.38	78.32	35.34	85.35	35.84	92.85	37.18	108.33	41.22	114.43	29.74
	33	55.10	28.99	63.08	31.26	78.32	36.37	85.35	36.88	92.85	38.26	105.57	41.34	114.43	30.60
	35	55.10	29.81	63.08	32.15	78.32	37.40	85.00	37.78	89.25	37.82	97.75	39.37	106.25	29.23
	37	55.10	30.49	63.08	32.89	78.32	38.26	85.11	38.69	87.70	38.02	96.05	39.57	104.40	29.38
	39	55.10	31.18	63.08	33.63	78.32	39.12	83.59	38.86	86.14	38.19	94.35	39.75	102.55	29.51
	41	55.10	31.87	63.08	34.38	77.26	39.45	80.66	38.33	84.59	38.33	92.65	39.90	100.71	29.62
43	55.10	32.57	63.08	35.13	75.13	39.20	79.09	38.40	83.04	38.45	90.95	40.02	98.86	29.71	
46	55.10	33.27	63.08	35.89	73.73	39.30	77.61	38.50	81.49	38.54	89.25	40.12	97.01	29.78	
48	53.18	33.13	60.27	35.38	67.36	37.04	70.90	36.29	74.45	36.33	81.54	37.82	88.63	28.08	
50	49.82	31.69	56.46	33.84	63.11	35.43	66.43	34.71	69.75	34.75	76.39	36.17	83.04	26.85	
52	46.47	30.16	52.66	32.20	58.86	33.72	61.96	33.03	65.06	33.07	71.25	34.43	77.45	25.56	
55	43.12	28.55	48.86	30.48	54.61	31.92	57.49	31.27	60.36	31.31	66.11	32.59	71.86	24.19	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

Table2-8.12:30HP cooling capacity(continued)

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)														
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24		
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	
90%	-15	49.59	9.32	56.75	10.05	70.93	11.76	77.61	11.98	84.06	12.37	97.55	13.65	110.21	10.53	
	-10	49.59	10.86	56.75	11.71	70.93	13.72	77.61	13.97	84.06	14.43	97.55	15.91	110.21	12.28	
	-5	49.59	12.44	56.75	13.41	70.93	15.70	77.61	15.99	84.06	16.51	97.55	18.21	110.21	14.05	
	-2	49.59	13.39	56.75	14.44	70.93	16.91	77.61	17.22	84.06	17.78	97.55	19.61	110.21	15.13	
	0	49.59	14.03	56.75	15.13	70.93	17.72	77.61	18.04	84.06	18.63	97.55	20.55	110.21	15.86	
	2	49.59	14.68	56.75	15.83	70.93	18.53	77.61	18.87	84.06	19.49	97.55	21.50	110.21	16.59	
	4	49.59	15.33	56.75	16.53	70.93	19.35	77.61	19.71	84.06	20.36	97.55	22.45	110.21	17.32	
	6	49.59	15.99	56.75	17.24	70.93	20.18	77.61	20.55	84.06	21.23	97.55	23.41	110.21	18.06	
	8	49.59	16.65	56.75	17.95	70.93	21.01	77.61	21.40	84.06	22.10	97.55	24.38	110.21	18.81	
	10	49.59	17.31	56.75	18.66	70.93	21.85	77.61	22.25	84.06	22.98	97.55	25.35	110.21	19.56	
	12	49.59	17.98	56.75	19.38	70.93	22.69	77.61	23.11	84.06	23.87	97.55	26.33	110.21	20.31	
	14	49.59	18.65	56.75	20.11	70.93	23.54	77.61	23.97	84.06	24.76	97.55	27.31	110.21	21.07	
	16	49.59	19.32	56.75	20.83	70.93	24.40	77.61	24.84	84.06	25.66	97.55	28.30	110.21	21.83	
	18	49.59	20.01	56.75	21.57	70.93	25.26	77.61	25.72	84.06	26.56	97.55	29.30	110.21	22.60	
	20	49.59	20.69	56.75	22.31	70.93	26.12	77.61	26.60	84.06	27.47	97.55	30.30	110.21	23.38	
	21	49.59	21.03	56.75	22.68	70.93	26.56	77.61	27.04	84.06	27.93	97.55	30.80	110.21	23.77	
	23	49.59	21.73	56.75	23.42	70.93	27.43	77.61	27.93	84.06	28.85	97.55	31.82	110.21	24.55	
	25	49.59	22.42	56.75	24.18	70.93	28.31	77.61	28.83	84.06	29.77	97.55	32.84	110.21	25.34	
	27	49.59	23.12	56.75	24.93	70.93	29.19	77.61	29.73	84.06	30.70	97.55	33.86	110.21	26.13	
	29	49.59	23.83	56.75	25.69	70.93	30.08	77.61	30.64	84.06	31.64	97.55	34.90	110.21	26.92	
	31	49.59	24.54	56.75	26.46	70.93	30.98	77.61	31.55	84.06	32.58	97.55	35.94	110.21	27.73	
	33	49.59	25.25	56.75	27.23	70.93	31.88	77.61	32.47	84.06	33.53	97.55	36.98	110.21	28.53	
	35	49.59	25.97	56.75	28.00	70.93	32.79	77.61	33.39	84.06	34.49	97.55	38.04	106.25	28.29	
	37	49.59	26.57	56.75	28.65	70.93	33.54	77.61	34.16	84.06	35.28	91.88	36.65	99.87	27.20	
	39	49.59	27.17	56.75	29.29	70.93	34.30	76.56	34.46	83.12	35.67	87.00	35.48	93.50	26.04	
	41	49.59	27.77	56.75	29.94	70.93	35.06	76.44	35.17	79.96	35.08	84.43	35.20	91.77	26.13	
	43	49.59	28.38	56.75	30.60	69.52	35.11	74.10	34.83	75.67	33.92	82.88	35.31	90.08	26.21	
	46	49.59	28.99	56.75	31.26	67.18	34.66	70.72	33.96	74.26	34.00	81.33	35.39	88.40	26.27	
	48	48.77	29.42	54.92	31.21	61.38	32.68	64.61	32.01	67.84	32.05	74.30	33.37	80.76	24.77	
	50	45.40	27.95	51.45	29.85	57.51	31.25	60.53	30.62	63.56	30.66	69.61	31.91	75.67	23.69	
	52	42.34	26.61	47.99	28.41	53.64	29.75	56.46	29.14	59.28	29.18	64.93	30.37	70.57	22.55	
	55	39.29	25.19	44.53	26.89	49.77	28.16	52.39	27.59	55.00	27.62	60.24	28.75	65.48	21.34	
	80%	-15	44.09	7.98	50.42	8.60	63.08	10.08	69.28	10.30	75.62	10.72	86.64	11.68	99.89	9.19
		-10	44.09	9.31	50.42	10.03	63.08	11.75	69.28	12.01	75.62	12.50	86.64	13.62	99.89	10.72
-5		44.09	10.65	50.42	11.48	63.08	13.45	69.28	13.75	75.62	14.31	86.64	15.59	99.89	12.27	
-2		44.09	11.47	50.42	12.36	63.08	14.49	69.28	14.81	75.62	15.41	86.64	16.78	99.89	13.21	
0		44.09	12.02	50.42	12.95	63.08	15.18	69.28	15.52	75.62	16.15	86.64	17.59	99.89	13.85	
2		44.09	12.58	50.42	13.55	63.08	15.88	69.28	16.23	75.62	16.90	86.64	18.40	99.89	14.49	
4		44.09	13.13	50.42	14.15	63.08	16.59	69.28	16.95	75.62	17.64	86.64	19.21	99.89	15.13	
6		44.09	13.70	50.42	14.75	63.08	17.29	69.28	17.68	75.62	18.40	86.64	20.04	99.89	15.77	
8		44.09	14.26	50.42	15.36	63.08	18.01	69.28	18.41	75.62	19.16	86.64	20.86	99.89	16.42	
10		44.09	14.83	50.42	15.98	63.08	18.72	69.28	19.14	75.62	19.92	86.64	21.69	99.89	17.08	
12		44.09	15.40	50.42	16.59	63.08	19.45	69.28	19.88	75.62	20.69	86.64	22.53	99.89	17.74	
14		44.09	15.98	50.42	17.21	63.08	20.17	69.28	20.62	75.62	21.46	86.64	23.37	99.89	18.40	
16		44.09	16.56	50.42	17.84	63.08	20.91	69.28	21.37	75.62	22.24	86.64	24.22	99.89	19.07	
18		44.09	17.14	50.42	18.46	63.08	21.64	69.28	22.12	75.62	23.02	86.64	25.07	99.89	19.74	
20		44.09	17.73	50.42	19.10	63.08	22.38	69.28	22.88	75.62	23.81	86.64	25.93	99.89	20.42	
21		44.09	18.02	50.42	19.41	63.08	22.76	69.28	23.26	75.62	24.21	86.64	26.36	99.89	20.76	
23		44.09	18.61	50.42	20.05	63.08	23.50	69.28	24.03	75.62	25.01	86.64	27.23	99.89	21.44	
25		44.09	19.21	50.42	20.70	63.08	24.26	69.28	24.80	75.62	25.81	86.64	28.10	99.89	22.13	
27		44.09	19.81	50.42	21.34	63.08	25.02	69.28	25.57	75.62	26.61	86.64	28.98	99.89	22.82	
29		44.09	20.41	50.42	21.99	63.08	25.78	69.28	26.35	75.62	27.43	86.64	29.87	99.89	23.51	
31		44.09	21.02	50.42	22.65	63.08	26.55	69.28	27.14	75.62	28.24	86.64	30.76	99.89	24.21	
33		44.09	21.64	50.42	23.31	63.08	27.32	69.28	27.93	75.62	29.07	86.64	31.65	99.89	24.92	
35		44.09	22.25	50.42	23.97	63.08	28.10	69.28	28.72	75.62	29.89	86.64	32.55	99.89	25.63	
37		44.09	22.76	50.42	24.52	63.08	28.74	69.28	29.38	75.62	30.58	86.64	33.30	99.87	26.21	
39		44.09	23.27	50.42	25.08	63.08	29.39	69.28	30.04	75.62	31.27	86.02	33.81	93.50	25.09	
41		44.09	23.79	50.42	25.63	63.08	30.04	69.28	30.71	74.10	31.32	81.13	32.59	87.12	23.90	
43		44.09	24.31	50.42	26.19	61.79	30.07	67.99	30.80	73.98	31.95	75.38	30.94	81.06	22.73	
46		44.09	24.84	50.42	26.76	61.90	30.78	65.65	30.38	66.82	29.48	73.18	30.69	79.55	22.78	
48		44.09	25.63	49.47	27.09	55.23	28.33	58.14	27.76	61.05	27.79	66.86	28.93	72.67	21.47	
50		41.62	24.69	46.30	25.88	51.75	27.10	54.47	26.55	57.20	26.58	62.64	27.67	68.09	20.54	
52		38.10	23.07	43.18	24.63	48.27	25.79	50.81	25.27	53.35	25.30	58.43	26.34	63.51	19.55	
55		35.35	21.84	40.07	23.32	44.78	24.41	47.14	23.92	49.50	23.95	54.21	24.93	58.92	18.50	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

Table2-8.12:30HP cooling capacity(continued)

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
70%	-15	38.58	6.69	44.09	7.21	55.10	8.44	60.73	8.65	66.24	9.00	77.14	9.96	86.76	7.65
	-10	38.58	7.80	44.09	8.40	55.10	9.84	60.73	10.09	66.24	10.50	77.14	11.62	86.76	8.92
	-5	38.58	8.93	44.09	9.62	55.10	11.26	60.73	11.55	66.24	12.01	77.14	13.30	86.76	10.21
	-2	38.58	9.62	44.09	10.36	55.10	12.13	60.73	12.44	66.24	12.94	77.14	14.32	86.76	11.00
	0	38.58	10.08	44.09	10.85	55.10	12.71	60.73	13.04	66.24	13.56	77.14	15.01	86.76	11.53
	2	38.58	10.55	44.09	11.35	55.10	13.29	60.73	13.64	66.24	14.18	77.14	15.70	86.76	12.06
	4	38.58	11.01	44.09	11.86	55.10	13.88	60.73	14.24	66.24	14.81	77.14	16.39	86.76	12.59
	6	38.58	11.48	44.09	12.36	55.10	14.47	60.73	14.85	66.24	15.44	77.14	17.09	86.76	13.13
	8	38.58	11.96	44.09	12.87	55.10	15.07	60.73	15.46	66.24	16.08	77.14	17.80	86.76	13.67
	10	38.58	12.43	44.09	13.39	55.10	15.67	60.73	16.08	66.24	16.72	77.14	18.51	86.76	14.21
	12	38.58	12.91	44.09	13.90	55.10	16.28	60.73	16.70	66.24	17.37	77.14	19.22	86.76	14.76
	14	38.58	13.39	44.09	14.42	55.10	16.89	60.73	17.32	66.24	18.01	77.14	19.94	86.76	15.31
	16	38.58	13.88	44.09	14.95	55.10	17.50	60.73	17.95	66.24	18.67	77.14	20.66	86.76	15.87
	18	38.58	14.37	44.09	15.47	55.10	18.11	60.73	18.58	66.24	19.33	77.14	21.39	86.76	16.43
	20	38.58	14.86	44.09	16.00	55.10	18.73	60.73	19.22	66.24	19.99	77.14	22.12	86.76	16.99
	21	38.58	15.11	44.09	16.27	55.10	19.05	60.73	19.54	66.24	20.32	77.14	22.49	86.76	17.27
	23	38.58	15.61	44.09	16.80	55.10	19.67	60.73	20.18	66.24	20.99	77.14	23.23	86.76	17.84
	25	38.58	16.11	44.09	17.34	55.10	20.30	60.73	20.83	66.24	21.66	77.14	23.98	86.76	18.41
	27	38.58	16.61	44.09	17.88	55.10	20.94	60.73	21.48	66.24	22.34	77.14	24.72	86.76	18.99
	29	38.58	17.12	44.09	18.43	55.10	21.58	60.73	22.13	66.24	23.02	77.14	25.48	86.76	19.57
	31	38.58	17.63	44.09	18.98	55.10	22.22	60.73	22.79	66.24	23.71	77.14	26.24	86.76	20.15
	33	38.58	18.14	44.09	19.53	55.10	22.87	60.73	23.46	66.24	24.40	77.14	27.00	86.76	20.74
35	38.58	18.66	44.09	20.09	55.10	23.52	60.73	24.13	66.24	25.09	77.14	27.77	86.76	21.33	
37	38.58	19.08	44.09	20.55	55.10	24.06	60.73	24.68	66.24	25.67	77.14	28.41	86.76	21.82	
39	38.58	19.52	44.09	21.01	55.10	24.60	60.73	25.23	66.24	26.25	77.14	29.05	86.76	22.31	
41	38.58	19.95	44.09	21.48	55.10	25.15	60.73	25.79	66.24	26.83	77.14	29.69	86.76	22.81	
43	38.58	20.38	44.09	21.95	55.10	25.70	60.73	26.36	66.24	27.41	74.29	29.22	80.75	21.69	
46	38.58	20.82	44.09	22.42	55.10	26.25	59.50	26.38	64.95	27.46	68.42	27.49	74.38	20.41	
48	38.58	21.49	44.09	23.13	51.58	25.36	52.17	23.87	54.44	23.75	59.63	24.72	64.81	18.35	
50	37.98	21.59	41.74	22.36	45.83	23.00	48.24	22.53	50.66	22.56	55.48	23.48	60.31	17.43	
52	33.75	19.58	38.25	20.91	42.75	21.89	45.00	21.44	47.25	21.47	51.75	22.35	56.25	16.59	
55	31.31	18.53	35.49	19.79	39.66	20.72	41.75	20.30	43.84	20.32	48.01	21.16	52.19	15.70	
60%	-15	33.06	5.46	37.87	5.89	47.25	6.89	52.06	7.06	56.75	7.34	66.24	8.14	74.80	6.28
	-10	33.06	6.37	37.87	6.87	47.25	8.03	52.06	8.23	56.75	8.56	66.24	9.49	74.80	7.32
	-5	33.06	7.29	37.87	7.86	47.25	9.19	52.06	9.43	56.75	9.80	66.24	10.87	74.80	8.38
	-2	33.06	7.85	37.87	8.47	47.25	9.90	52.06	10.15	56.75	10.55	66.24	11.70	74.80	9.02
	0	33.06	8.22	37.87	8.87	47.25	10.37	52.06	10.64	56.75	11.06	66.24	12.26	74.80	9.46
	2	33.06	8.60	37.87	9.28	47.25	10.85	52.06	11.13	56.75	11.56	66.24	12.83	74.80	9.89
	4	33.06	8.98	37.87	9.69	47.25	11.33	52.06	11.62	56.75	12.08	66.24	13.40	74.80	10.33
	6	33.06	9.37	37.87	10.11	47.25	11.81	52.06	12.11	56.75	12.59	66.24	13.97	74.80	10.77
	8	33.06	9.75	37.87	10.52	47.25	12.30	52.06	12.61	56.75	13.11	66.24	14.55	74.80	11.22
	10	33.06	10.14	37.87	10.94	47.25	12.79	52.06	13.12	56.75	13.63	66.24	15.13	74.80	11.66
	12	33.06	7.59	37.87	8.20	47.25	9.58	52.06	9.82	56.75	10.21	66.24	11.33	74.80	12.11
	14	33.06	7.88	37.87	8.50	47.25	9.94	52.06	10.19	56.75	10.59	66.24	11.75	74.80	12.57
	16	33.06	8.16	37.87	8.81	47.25	10.30	52.06	10.56	56.75	10.98	66.24	12.18	74.80	13.02
	18	33.06	8.45	37.87	9.12	47.25	10.66	52.06	10.93	56.75	11.36	66.24	12.61	74.80	13.48
	20	33.06	8.74	37.87	9.43	47.25	11.03	52.06	11.31	56.75	11.75	66.24	13.04	74.80	13.94
	21	33.06	8.89	37.87	9.59	47.25	11.21	52.06	11.50	56.75	11.95	66.24	13.26	74.80	14.18
	23	33.06	9.18	37.87	9.91	47.25	11.58	52.06	11.87	56.75	12.34	66.24	13.69	74.80	14.64
	25	33.06	9.47	37.87	10.22	47.25	11.95	52.06	12.25	56.75	12.74	66.24	14.13	74.80	15.11
	27	33.06	9.77	37.87	10.54	47.25	12.32	52.06	12.64	56.75	13.14	66.24	14.57	74.80	15.58
	29	33.06	10.07	37.87	10.87	47.25	12.70	52.06	13.02	56.75	13.54	66.24	15.02	74.80	16.06
	31	33.06	10.37	37.87	11.19	47.25	13.08	52.06	13.41	56.75	13.94	66.24	15.47	74.80	16.54
	33	33.06	10.67	37.87	11.51	47.25	13.46	52.06	13.80	56.75	14.35	66.24	15.92	74.80	17.02
35	33.06	10.97	37.87	11.84	47.25	13.84	52.06	14.20	56.75	14.76	66.24	16.37	74.80	17.50	
37	33.06	11.23	37.87	12.11	47.25	14.16	52.06	14.52	56.75	15.09	66.24	16.74	74.80	17.90	
39	33.06	11.48	37.87	12.39	47.25	14.48	52.06	14.85	56.75	15.43	66.24	17.12	74.80	18.31	
41	33.06	11.73	37.87	12.66	47.25	14.80	52.06	15.18	56.75	15.78	66.24	17.50	74.80	18.72	
43	33.06	11.99	37.87	12.94	47.25	15.12	52.06	15.51	56.75	16.12	66.24	17.88	74.80	19.12	
46	33.06	12.25	37.87	13.22	47.25	15.45	52.06	15.84	56.75	16.47	66.24	18.27	74.38	19.43	
48	33.06	12.64	37.87	13.64	47.25	15.94	51.85	16.28	54.44	16.30	59.63	16.97	64.81	17.47	
50	33.06	12.90	37.87	13.92	44.41	15.30	46.75	14.99	49.09	15.00	53.76	15.62	58.44	16.08	
52	31.65	12.60	35.40	13.28	39.57	13.91	41.65	13.62	43.73	13.64	47.90	14.20	52.06	14.62	
55	29.43	11.96	31.07	11.89	34.72	12.45	36.55	12.20	38.38	12.21	42.03	12.71	45.69	13.08	

**Abbreviations:**

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

**Notes:**

Shaded cells indicate rating condition.

Table continued on next page ...

# MDV8 ECO VRF 50Hz



Table 2-8.12: 30HP cooling capacity (continued)

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
50%	-15	27.55	3.10	31.54	3.34	39.40	3.91	43.38	4.01	47.25	4.16	55.10	4.61	63.08	5.00
	-10	27.55	3.61	31.54	3.89	39.40	4.56	43.38	4.67	47.25	4.85	55.10	5.38	63.08	5.83
	-5	27.55	4.13	31.54	4.46	39.40	5.22	43.38	5.35	47.25	5.55	55.10	6.15	63.08	6.67
	-2	27.55	4.45	31.54	4.80	39.40	5.62	43.38	5.76	47.25	5.98	55.10	6.63	63.08	7.18
	0	27.55	4.66	31.54	5.03	39.40	5.89	43.38	6.03	47.25	6.27	55.10	6.95	63.08	7.53
	2	27.55	4.88	31.54	5.26	39.40	6.16	43.38	6.31	47.25	6.55	55.10	7.27	63.08	7.88
	4	27.55	5.10	31.54	5.50	39.40	6.43	43.38	6.59	47.25	6.85	55.10	7.59	63.08	8.23
	6	27.55	5.31	31.54	5.73	39.40	6.71	43.38	6.87	47.25	7.14	55.10	7.91	63.08	8.58
	8	27.55	5.53	31.54	5.97	39.40	6.98	43.38	7.16	47.25	7.43	55.10	8.24	63.08	8.93
	10	27.55	5.75	31.54	6.20	39.40	7.26	43.38	7.44	47.25	7.73	55.10	8.57	63.08	9.29
	12	27.55	5.97	31.54	6.44	39.40	7.54	43.38	7.73	47.25	8.03	55.10	8.90	63.08	9.64
	14	27.55	6.20	31.54	6.69	39.40	7.82	43.38	8.02	47.25	8.33	55.10	9.23	63.08	10.00
	16	27.55	6.42	31.54	6.93	39.40	8.11	43.38	8.31	47.25	8.63	55.10	9.56	63.08	10.37
	18	27.55	6.65	31.54	7.17	39.40	8.39	43.38	8.60	47.25	8.93	55.10	9.90	63.08	10.73
	20	27.55	6.88	31.54	7.42	39.40	8.68	43.38	8.89	47.25	9.24	55.10	10.24	63.08	11.10
	21	27.55	6.99	31.54	7.54	39.40	8.82	43.38	9.04	47.25	9.39	55.10	10.41	63.08	11.29
	23	27.55	7.22	31.54	7.79	39.40	9.12	43.38	9.34	47.25	9.70	55.10	10.75	63.08	11.66
	25	27.55	7.45	31.54	8.04	39.40	9.41	43.38	9.64	47.25	10.01	55.10	11.10	63.08	12.03
	27	27.55	7.69	31.54	8.29	39.40	9.70	43.38	9.94	47.25	10.32	55.10	11.44	63.08	12.41
	29	27.55	7.92	31.54	8.54	39.40	10.00	43.38	10.24	47.25	10.64	55.10	11.79	63.08	12.78
	31	27.55	8.16	31.54	8.80	39.40	10.30	43.38	10.55	47.25	10.96	55.10	12.14	63.08	13.17
	33	27.55	8.39	31.54	9.05	39.40	10.60	43.38	10.86	47.25	11.28	55.10	12.50	63.08	13.55
	35	27.55	8.63	31.54	9.31	39.40	10.90	43.38	11.17	47.25	11.60	55.10	12.85	63.08	13.93
	37	27.55	8.83	31.54	9.52	39.40	11.15	43.38	11.42	47.25	11.86	55.10	13.15	63.08	14.25
	39	27.55	9.03	31.54	9.74	39.40	11.40	43.38	11.68	47.25	12.13	55.10	13.45	63.08	14.58
41	27.55	9.23	31.54	9.96	39.40	11.65	43.38	11.94	47.25	12.40	55.10	13.74	63.08	14.90	
43	27.55	9.43	31.54	10.17	39.40	11.91	43.38	12.20	47.25	12.67	55.10	14.04	63.08	15.23	
46	27.55	9.64	31.54	10.39	39.40	12.16	43.38	12.46	47.25	12.94	55.10	14.35	63.08	15.55	
48	27.55	9.94	31.54	10.72	39.40	12.55	43.38	12.86	47.25	13.36	55.10	14.80	63.08	16.05	
50	27.55	10.15	31.54	10.95	39.40	12.81	43.38	13.13	47.25	13.63	53.76	14.74	58.44	15.18	
52	27.55	10.36	31.54	11.17	39.40	13.07	41.65	12.86	43.73	12.88	47.90	13.40	52.06	13.80	
55	27.55	10.57	31.07	11.23	34.72	11.75	36.55	11.51	38.38	11.53	42.03	12.00	45.69	12.35	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table 2-8.13: 32HP cooling capacity

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		KW	KW	KW	KW	KW	KW	KW	KW	KW	KW	KW	KW	KW	KW
130%	-15	72.20	14.87	82.51	16.01	101.17	18.40	111.24	18.83	121.31	19.58	128.19	19.66	131.25	13.11
	-10	72.20	17.02	82.51	18.33	101.17	21.05	111.24	21.54	121.31	22.40	128.19	22.50	131.25	15.01
	-5	72.20	19.21	82.51	20.68	101.17	23.75	111.24	24.31	121.31	25.28	128.19	25.39	131.25	16.93
	-2	72.20	20.53	82.51	22.11	101.17	25.39	111.24	25.99	121.31	27.02	128.19	27.14	131.25	18.10
	0	72.20	21.42	82.51	23.07	101.17	26.50	111.24	27.12	121.31	28.20	128.19	28.32	131.25	18.89
	2	72.20	22.32	82.51	24.03	101.17	27.61	111.24	28.25	121.31	29.38	128.19	29.51	131.25	19.68
	4	72.20	23.23	82.51	25.01	101.17	28.73	111.24	29.40	121.31	30.57	128.19	30.70	131.25	20.48
	6	72.20	24.14	82.51	25.99	101.17	29.85	111.24	30.55	121.31	31.76	128.19	31.90	131.25	21.28
	8	72.20	25.05	82.51	26.97	101.17	30.98	111.24	31.71	121.31	32.97	128.19	33.11	131.25	22.09
	10	72.20	25.97	82.51	27.96	101.17	32.12	111.24	32.87	121.31	34.18	128.19	34.33	131.25	22.90
	12	72.20	26.90	82.51	28.96	101.17	33.27	111.24	34.05	121.31	35.40	128.19	35.56	131.25	23.72
	14	72.20	27.83	82.51	29.97	101.17	34.42	111.24	35.23	121.31	36.63	128.19	36.79	131.25	24.54
	16	72.20	28.77	82.51	30.98	101.17	35.59	111.24	36.42	121.31	37.87	128.19	38.03	131.25	25.37
	18	72.20	29.72	82.51	32.00	101.17	36.76	111.24	37.61	121.31	39.11	128.19	39.28	131.25	26.20
	20	72.20	30.67	82.51	33.02	101.17	37.93	111.24	38.82	121.31	40.37	128.19	40.54	131.25	27.04
	21	72.20	31.15	82.51	33.54	101.17	38.52	111.24	39.42	121.31	40.99	128.19	41.17	131.25	27.46
	23	72.20	32.11	82.51	34.57	101.17	39.71	111.24	40.64	121.31	42.26	128.19	42.44	131.25	28.31
	25	72.20	33.08	82.51	35.61	101.17	40.91	111.24	41.86	121.31	43.53	128.19	43.72	131.25	29.16
	27	72.20	34.05	82.51	36.66	101.17	42.11	111.24	43.10	121.31	44.81	128.19	45.01	131.25	30.02
	29	72.20	35.03	82.51	37.72	101.17	43.33	111.24	44.34	121.31	46.10	128.19	46.30	131.25	30.88
	31	72.20	36.02	82.51	38.78	101.17	44.55	111.24	45.59	118.61	46.35	128.19	47.61	131.25	31.75
	33	72.20	37.01	82.51	39.85	99.91	45.20	105.17	44.29	110.43	44.34	120.95	46.16	131.25	32.63
	35	72.20	38.01	82.51	40.92	94.78	44.04	97.38	42.11	102.25	42.16	111.99	43.89	121.72	31.08
	37	70.97	38.17	80.92	41.01	93.06	44.18	95.27	42.09	99.30	41.84	108.76	43.55	118.21	30.84
	39	70.84	38.92	81.04	41.94	91.23	44.24	93.81	42.33	97.27	41.86	106.54	43.57	115.80	30.85
	41	70.72	39.67	81.04	42.83	87.30	43.22	90.71	41.80	95.25	41.85	104.32	43.56	113.39	30.85
	43	70.72	40.49	77.35	41.72	84.35	42.62	88.79	41.76	93.22	41.81	102.10	43.52	110.98	30.82
	46	67.78	39.60	73.83	40.64	82.51	42.55	86.86	41.69	91.20	41.74	99.89	43.45	108.57	30.76
	48	58.15	35.00	65.90	37.37	73.65	39.13	77.53	38.34	81.41	38.38	89.16	39.96	96.91	28.29
50	53.48	32.83	60.61	35.06	67.74	36.71	71.31	35.96	74.88	36.00	82.01	37.48	89.14	26.54	
52	48.82	30.55	55.33	32.62	61.84	34.16	65.09	33.47	68.35	33.51	74.86	34.88	81.36	24.70	
55	44.15	28.17	50.04	30.08	55.93	31.49	58.87	30.85	61.82	30.89	67.70	32.15	73.59	22.77	
120%	-15	67.78	14.50	77.47	15.61	95.65	18.06	105.71	18.58	114.06	19.11	124.87	19.89	128.55	13.34
	-10	67.78	16.60	77.47	17.87	95.65	20.67	105.71	21.26	114.06	21.87	124.87	22.76	128.55	15.26
	-5	67.78	18.72	77.47	20.16	95.65	23.32	105.71	23.99	114.06	24.68	124.87	25.68	128.55	17.22
	-2	67.78	20.02	77.47	21.56	95.65	24.93	105.71	25.65	114.06	26.39	124.87	27.45	128.55	18.41
	0	67.78	20.89	77.47	22.49	95.65	26.02	105.71	26.76	114.06	27.53	124.87	28.65	128.55	19.21
	2	67.78	21.76	77.47	23.43	95.65	27.11	105.71	27.88	114.06	28.69	124.87	29.85	128.55	20.02
	4	67.78	22.64	77.47	24.38	95.65	28.20	105.71	29.01	114.06	29.85	124.87	31.06	128.55	20.83
	6	67.78	23.53	77.47	25.34	95.65	29.31	105.71	30.15	114.06	31.02	124.87	32.27	128.55	21.64
	8	67.78	24.42	77.47	26.30	95.65	30.42	105.71	31.29	114.06	32.19	124.87	33.50	128.55	22.46
	10	67.78	25.32	77.47	27.27	95.65	31.54	105.71	32.44	114.06	33.38	124.87	34.73	128.55	23.29
	12	67.78	26.23	77.47	28.24	95.65	32.66	105.71	33.60	114.06	34.57	124.87	35.97	128.55	24.12
	14	67.78	27.14	77.47	29.22	95.65	33.80	105.71	34.76	114.06	35.77	124.87	37.22	128.55	24.96
	16	67.78	28.05	77.47	30.21	95.65	34.94	105.71	35.94	114.06	36.97	124.87	38.47	128.55	25.80
	18	67.78	28.97	77.47	31.20	95.65	36.09	105.71	37.12	114.06	38.19	124.87	39.74	128.55	26.65
	20	67.78	29.90	77.47	32.20	95.65	37.24	105.71	38.31	114.06	39.41	124.87	41.01	128.55	27.50
	21	67.78	30.37	77.47	32.70	95.65	37.82	105.71	38.90	114.06	40.03	124.87	41.65	128.55	27.93
	23	67.78	31.30	77.47	33.71	95.65	38.99	105.71	40.11	114.06	41.26	124.87	42.93	128.55	28.79
	25	67.78	32.25	77.47	34.72	95.65	40.17	105.71	41.31	114.06	42.51	124.87	44.23	128.55	29.66
	27	67.78	33.20	77.47	35.75	95.65	41.35	105.71	42.53	114.06	43.76	124.87	45.53	128.55	30.53
	29	67.78	34.15	77.47	36.78	95.65	42.54	105.71	43.75	114.06	45.02	124.87	46.84	128.55	31.41
	31	67.78	35.11	77.47	37.81	95.65	43.74	105.71	44.99	114.06	46.28	124.87	48.16	128.55	32.30
	33	67.78	36.08	77.47	38.85	95.65	44.94	102.35	44.76	107.47	44.81	117.70	46.65	127.94	33.03
	35	67.78	37.06	77.47	39.90	92.94	44.85	95.65	42.96	99.51	42.61	108.99	44.36	118.46	31.41
	37	67.78	37.86	77.47	40.77	91.47	45.09	93.68	42.98	96.17	42.07	105.32	43.80	114.48	31.01
	39	67.29	38.39	76.26	40.99	89.88	45.26	92.33	43.27	94.54	42.25	103.18	43.82	112.15	31.03
	41	66.55	38.77	76.00	41.71	85.70	44.06	87.85	42.04	92.24	42.09	101.03	43.81	109.81	31.02
	43	66.55	39.57	75.87	42.50	81.68	42.87	85.98	42.00	90.28	42.05	98.88	43.77	107.48	30.99
	46	66.55	40.38	71.50	40.87	79.91	42.79	84.11	41.92	88.32	41.98	96.73	43.69	105.14	30.94
	48	56.31	35.20	63.82	37.59	71.33	39.36	75.08	38.56	78.84	38.60	86.34	40.18	93.85	28.45
50	51.79	33.02	58.70	35.26	65.61	36.92	69.06	36.17	72.51	36.21	79.42	37.69	86.32	26.69	
52	47.28	30.73	53.58	32.81	59.88	34.35	63.04	33.66	66.19	33.70	72.49	35.08	78.80	24.84	
55	42.76	28.33	48.46	30.25	54.16	31.67	57.01	31.03	59.86	31.06	65.57	32.34	71.27	22.90	

## Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

## Notes:

Shaded cells indicate rating condition.

Table continued on next page ...



Table2-8.13:32HP cooling capacity(continued)

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
110%	-15	63.24	14.08	72.20	15.15	88.64	17.42	97.48	17.83	106.82	18.63	122.41	20.29	124.87	13.49
	-10	63.24	16.12	72.20	17.34	88.64	19.94	97.48	20.41	106.82	21.32	122.41	23.23	124.87	15.43
	-5	63.24	18.18	72.20	19.56	88.64	22.50	97.48	23.03	106.82	24.06	122.41	26.20	124.87	17.41
	-2	63.24	19.44	72.20	20.91	88.64	24.05	97.48	24.62	106.82	25.72	122.41	28.02	124.87	18.62
	0	63.24	20.29	72.20	21.82	88.64	25.10	97.48	25.69	106.82	26.84	122.41	29.23	124.87	19.43
	2	63.24	21.14	72.20	22.73	88.64	26.15	97.48	26.76	106.82	27.96	122.41	30.46	124.87	20.24
	4	63.24	21.99	72.20	23.65	88.64	27.21	97.48	27.85	106.82	29.10	122.41	31.69	124.87	21.06
	6	63.24	22.85	72.20	24.58	88.64	28.27	97.48	28.94	106.82	30.24	122.41	32.93	124.87	21.88
	8	63.24	23.72	72.20	25.51	88.64	29.34	97.48	30.03	106.82	31.38	122.41	34.18	124.87	22.71
	10	63.24	24.59	72.20	26.45	88.64	30.42	97.48	31.14	106.82	32.54	122.41	35.44	124.87	23.55
	12	63.24	25.47	72.20	27.40	88.64	31.51	97.48	32.25	106.82	33.70	122.41	36.70	124.87	24.39
	14	63.24	26.35	72.20	28.35	88.64	32.60	97.48	33.37	106.82	34.87	122.41	37.98	124.87	25.24
	16	63.24	27.24	72.20	29.30	88.64	33.70	97.48	34.50	106.82	36.05	122.41	39.26	124.87	26.09
	18	63.24	28.14	72.20	30.27	88.64	34.81	97.48	35.63	106.82	37.23	122.41	40.55	124.87	26.95
	20	63.24	29.04	72.20	31.24	88.64	35.93	97.48	36.77	106.82	38.42	122.41	41.85	124.87	27.81
	21	63.24	29.49	72.20	31.72	88.64	36.49	97.48	37.34	106.82	39.02	122.41	42.50	124.87	28.24
	23	63.24	30.40	72.20	32.70	88.64	37.61	97.48	38.50	106.82	40.23	122.41	43.81	124.87	29.11
	25	63.24	31.32	72.20	33.69	88.64	38.75	97.48	39.66	106.82	41.44	122.41	45.13	124.87	29.99
	27	63.24	32.24	72.20	34.68	88.64	39.89	97.48	40.82	106.82	42.66	122.41	46.46	124.87	30.87
	29	63.24	33.17	72.20	35.68	88.64	41.03	97.48	42.00	106.82	43.88	122.41	47.80	124.87	31.76
	31	63.24	34.10	72.20	36.68	88.64	42.19	97.48	43.18	106.82	45.12	120.66	48.44	124.87	32.66
	33	63.24	35.04	72.20	37.69	88.64	43.35	97.48	44.37	102.57	44.52	112.34	46.34	122.11	32.81
	35	63.24	35.99	72.20	38.71	88.52	44.46	93.56	43.74	95.53	42.58	104.02	44.07	113.06	31.20
	37	63.24	36.77	72.20	39.55	88.52	45.43	91.96	43.92	94.05	42.83	100.76	43.62	109.53	30.88
	39	63.24	37.55	72.20	40.39	88.40	46.33	90.49	44.14	92.82	43.18	98.71	43.64	107.29	30.90
	41	63.24	38.35	72.20	41.24	84.47	45.21	86.68	43.17	88.25	41.91	96.65	43.63	105.06	30.89
	43	61.88	38.30	70.84	41.31	78.15	42.69	82.26	41.82	86.37	41.87	94.60	43.59	102.83	30.86
46	62.01	39.16	68.40	40.70	76.45	42.62	80.47	41.75	84.50	41.80	92.54	43.51	100.59	30.81	
48	53.87	35.06	61.06	37.43	68.24	39.19	71.83	38.40	75.42	38.44	82.61	40.02	89.79	28.34	
50	49.55	32.88	56.16	35.11	62.77	36.76	66.07	36.02	69.37	36.06	75.98	37.54	82.59	26.58	
52	45.23	30.60	51.26	32.67	57.29	34.21	60.31	33.52	63.32	33.56	69.35	34.93	75.38	24.73	
55	40.91	28.21	46.36	30.12	51.82	31.54	54.55	30.90	57.27	30.94	62.73	32.20	68.18	22.80	
100%	-15	58.44	13.58	66.79	14.62	83.25	17.08	90.37	17.25	99.08	18.03	114.93	19.88	121.80	13.73
	-10	58.44	15.54	66.79	16.73	83.25	19.54	90.37	19.74	99.08	20.64	114.93	22.75	121.80	15.71
	-5	58.44	17.54	66.79	18.88	83.25	22.05	90.37	22.27	99.08	23.29	114.93	25.67	121.80	17.72
	-2	58.44	18.75	66.79	20.19	83.25	23.57	90.37	23.81	99.08	24.90	114.93	27.45	121.80	18.95
	0	58.44	19.56	66.79	21.06	83.25	24.60	90.37	24.85	99.08	25.98	114.93	28.64	121.80	19.77
	2	58.44	20.38	66.79	21.95	83.25	25.63	90.37	25.89	99.08	27.07	114.93	29.84	121.80	20.60
	4	58.44	21.21	66.79	22.83	83.25	26.66	90.37	26.94	99.08	28.16	114.93	31.05	121.80	21.43
	6	58.44	22.04	66.79	23.73	83.25	27.71	90.37	27.99	99.08	29.26	114.93	32.26	121.80	22.27
	8	58.44	22.87	66.79	24.63	83.25	28.76	90.37	29.05	99.08	30.37	114.93	33.49	121.80	23.12
	10	58.44	23.71	66.79	25.53	83.25	29.82	90.37	30.12	99.08	31.49	114.93	34.72	121.80	23.97
	12	58.44	24.56	66.79	26.45	83.25	30.88	90.37	31.20	99.08	32.62	114.93	35.96	121.80	24.82
	14	58.44	25.41	66.79	27.36	83.25	31.95	90.37	32.28	99.08	33.75	114.93	37.21	121.80	25.69
	16	58.44	26.27	66.79	28.29	83.25	33.03	90.37	33.37	99.08	34.89	114.93	38.46	121.80	26.55
	18	58.44	27.13	66.79	29.22	83.25	34.12	90.37	34.47	99.08	36.03	114.93	39.73	121.80	27.43
	20	58.44	28.00	66.79	30.15	83.25	35.21	90.37	35.57	99.08	37.19	114.93	41.00	121.80	28.30
	21	58.44	28.44	66.79	30.62	83.25	35.76	90.37	36.13	99.08	37.77	114.93	41.64	121.80	28.75
	23	58.44	29.32	66.79	31.57	83.25	36.86	90.37	37.24	99.08	38.93	114.93	42.92	121.80	29.63
	25	58.44	30.20	66.79	32.52	83.25	37.97	90.37	38.36	99.08	40.11	114.93	44.22	121.80	30.53
	27	58.44	31.09	66.79	33.47	83.25	39.09	90.37	39.49	99.08	41.29	114.93	45.52	121.80	31.42
	29	58.44	31.98	66.79	34.44	83.25	40.21	90.37	40.63	99.08	42.47	114.93	46.83	121.80	32.33
	31	58.44	32.88	66.79	35.41	83.25	41.35	90.37	41.77	99.08	43.67	114.93	48.15	121.80	33.24
	33	58.44	33.79	66.79	36.38	83.25	42.49	90.37	42.92	99.08	44.87	111.78	48.12	121.50	34.07
	35	58.44	34.70	66.79	37.37	83.25	43.63	90.00	43.90	94.50	43.96	103.50	45.76	112.50	32.40
	37	58.44	35.46	66.79	38.18	83.25	44.58	90.00	44.85	92.61	44.01	101.43	45.81	110.25	32.44
	39	58.44	36.21	66.79	38.99	83.25	45.53	88.52	45.06	90.72	44.03	99.36	45.84	108.00	32.46
	41	58.44	36.98	66.79	39.81	81.77	45.66	84.60	43.97	88.83	44.03	97.29	45.83	105.75	32.45
	43	58.44	37.74	66.79	40.64	78.66	44.84	82.80	43.93	86.95	43.98	95.23	45.78	103.51	32.42
46	58.44	38.51	66.79	41.47	76.96	44.76	81.01	43.86	85.06	43.91	93.16	45.71	101.26	32.36	
48	54.23	36.82	61.46	39.32	68.69	41.17	72.31	40.33	75.92	40.38	83.15	42.03	90.38	29.76	
50	49.88	34.54	56.53	36.88	63.18	38.62	66.51	37.83	69.83	37.88	76.48	39.43	83.13	27.92	
52	45.53	32.14	51.60	34.32	57.67	35.94	60.71	35.21	63.74	35.25	69.81	36.69	75.88	25.98	
55	41.18	29.63	46.67	31.64	52.16	33.13	54.91	32.46	57.65	32.50	63.14	33.83	68.63	23.95	

Abbreviations:  
 CR: Combination ratio  
 TC: Total capacity (kW)  
 PI: Power input (compressor + outdoor fan motor) (kW)  
 Notes:  
 Shaded cells indicate rating condition.

Table continued on next page ...



*Table2-8.13:32HP cooling capacity(continued)*

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
90%	-15	52.56	11.85	60.04	12.76	75.14	14.96	82.64	15.31	88.52	15.64	103.62	17.40	117.38	12.84
	-10	52.56	13.57	60.04	14.60	75.14	17.12	82.64	17.52	88.52	17.90	103.62	19.91	117.38	14.69
	-5	52.56	15.31	60.04	16.47	75.14	19.31	82.64	19.77	88.52	20.19	103.62	22.47	117.38	16.58
	-2	52.56	16.36	60.04	17.61	75.14	20.65	82.64	21.14	88.52	21.59	103.62	24.02	117.38	17.72
	0	52.56	17.08	60.04	18.38	75.14	21.55	82.64	22.05	88.52	22.53	103.62	25.06	117.38	18.49
	2	52.56	17.79	60.04	19.15	75.14	22.45	82.64	22.98	88.52	23.47	103.62	26.11	117.38	19.27
	4	52.56	18.51	60.04	19.92	75.14	23.36	82.64	23.91	88.52	24.42	103.62	27.17	117.38	20.05
	6	52.56	19.24	60.04	20.70	75.14	24.27	82.64	24.85	88.52	25.38	103.62	28.23	117.38	20.83
	8	52.56	19.97	60.04	21.49	75.14	25.19	82.64	25.79	88.52	26.34	103.62	29.30	117.38	21.62
	10	52.56	20.70	60.04	22.28	75.14	26.12	82.64	26.74	88.52	27.31	103.62	30.38	117.38	22.42
	12	52.56	21.44	60.04	23.07	75.14	27.05	82.64	27.69	88.52	28.28	103.62	31.47	117.38	23.22
	14	52.56	22.18	60.04	23.87	75.14	27.99	82.64	28.65	88.52	29.26	103.62	32.56	117.38	24.03
	16	52.56	22.93	60.04	24.68	75.14	28.94	82.64	29.62	88.52	30.25	103.62	33.66	117.38	24.84
	18	52.56	23.69	60.04	25.49	75.14	29.89	82.64	30.59	88.52	31.25	103.62	34.76	117.38	25.65
	20	52.56	24.44	60.04	26.31	75.14	30.84	82.64	31.57	88.52	32.25	103.62	35.88	117.38	26.48
	21	52.56	24.83	60.04	26.72	75.14	31.33	82.64	32.06	88.52	32.75	103.62	36.44	117.38	26.89
	23	52.56	25.59	60.04	27.54	75.14	32.29	82.64	33.05	88.52	33.76	103.62	37.56	117.38	27.72
	25	52.56	26.36	60.04	28.37	75.14	33.27	82.64	34.05	88.52	34.78	103.62	38.69	117.38	28.55
	27	52.56	27.14	60.04	29.21	75.14	34.24	82.64	35.05	88.52	35.80	103.62	39.83	117.38	29.39
	29	52.56	27.92	60.04	30.05	75.14	35.23	82.64	36.06	88.52	36.83	103.62	40.98	117.38	30.24
	31	52.56	28.71	60.04	30.89	75.14	36.22	82.64	37.08	88.52	37.87	103.62	42.13	117.38	31.09
	33	52.56	29.50	60.04	31.75	75.14	37.22	82.64	38.10	88.52	38.91	103.62	43.29	117.38	31.95
	35	52.56	30.29	60.04	32.60	75.14	38.23	82.64	39.13	88.52	39.96	103.50	44.41	112.50	31.45
37	52.56	30.95	60.04	33.31	75.14	39.05	82.64	39.98	88.52	40.83	97.29	42.65	105.75	30.20	
39	52.56	31.61	60.04	34.02	75.14	39.89	81.04	40.04	88.03	41.47	92.33	41.34	99.00	28.88	
41	52.56	32.28	60.04	34.74	73.66	39.93	81.16	40.94	84.47	40.63	88.66	40.53	96.37	28.70	
43	52.56	32.95	60.04	35.46	73.66	40.75	77.72	40.02	79.23	38.90	86.77	40.49	94.32	28.67	
46	52.56	33.62	60.04	36.18	70.13	39.59	73.82	38.79	77.51	38.83	84.89	40.43	92.27	28.62	
48	51.69	34.07	56.01	34.78	62.59	36.41	65.89	35.67	69.18	35.72	75.77	37.18	82.36	26.33	
50	45.45	30.55	51.51	32.62	57.57	34.15	60.60	33.46	63.63	33.50	69.69	34.87	75.76	24.69	
52	41.49	28.43	47.02	30.36	52.55	31.78	55.32	31.14	58.09	31.18	63.62	32.45	69.15	22.98	
55	37.53	26.21	42.53	27.98	47.53	29.30	50.03	28.71	52.54	28.74	57.54	29.92	62.54	21.18	
80%	-15	46.78	10.20	53.41	10.97	66.79	12.85	73.42	13.15	80.17	13.69	91.84	14.90	105.34	11.14
	-10	46.78	11.67	53.41	12.55	66.79	14.71	73.42	15.05	80.17	15.67	91.84	17.06	105.34	12.75
	-5	46.78	13.17	53.41	14.16	66.79	16.59	73.42	16.98	80.17	17.68	91.84	19.25	105.34	14.38
	-2	46.78	14.08	53.41	15.14	66.79	17.74	73.42	18.15	80.17	18.90	91.84	20.58	105.34	15.37
	0	46.78	14.69	53.41	15.80	66.79	18.51	73.42	18.94	80.17	19.72	91.84	21.47	105.34	16.04
	2	46.78	15.30	53.41	16.46	66.79	19.29	73.42	19.73	80.17	20.54	91.84	22.37	105.34	16.71
	4	46.78	15.92	53.41	17.13	66.79	20.07	73.42	20.53	80.17	21.38	91.84	23.27	105.34	17.39
	6	46.78	16.55	53.41	17.80	66.79	20.85	73.42	21.33	80.17	22.21	91.84	24.19	105.34	18.07
	8	46.78	17.18	53.41	18.47	66.79	21.64	73.42	22.14	80.17	23.06	91.84	25.10	105.34	18.76
	10	46.78	17.81	53.41	19.15	66.79	22.44	73.42	22.96	80.17	23.90	91.84	26.03	105.34	19.45
	12	46.78	18.44	53.41	19.84	66.79	23.24	73.42	23.78	80.17	24.76	91.84	26.96	105.34	20.14
	14	46.78	19.08	53.41	20.53	66.79	24.05	73.42	24.60	80.17	25.62	91.84	27.89	105.34	20.84
	16	46.78	19.73	53.41	21.22	66.79	24.86	73.42	25.43	80.17	26.48	91.84	28.83	105.34	21.54
	18	46.78	20.38	53.41	21.92	66.79	25.68	73.42	26.27	80.17	27.35	91.84	29.78	105.34	22.25
	20	46.78	21.03	53.41	22.62	66.79	26.50	73.42	27.11	80.17	28.23	91.84	30.73	105.34	22.96
	21	46.78	21.36	53.41	22.97	66.79	26.91	73.42	27.53	80.17	28.67	91.84	31.21	105.34	23.32
	23	46.78	22.01	53.41	23.68	66.79	27.74	73.42	28.38	80.17	29.55	91.84	32.18	105.34	24.04
	25	46.78	22.68	53.41	24.39	66.79	28.58	73.42	29.24	80.17	30.44	91.84	33.15	105.34	24.77
	27	46.78	23.35	53.41	25.11	66.79	29.42	73.42	30.10	80.17	31.34	91.84	34.12	105.34	25.50
	29	46.78	24.02	53.41	25.83	66.79	30.27	73.42	30.96	80.17	32.24	91.84	35.10	105.34	26.23
	31	46.78	24.69	53.41	26.56	66.79	31.12	73.42	31.84	80.17	33.15	91.84	36.09	105.34	26.97
	33	46.78	25.37	53.41	27.29	66.79	31.98	73.42	32.71	80.17	34.06	91.84	37.09	105.34	27.71
	35	46.78	26.06	53.41	28.03	66.79	32.84	73.42	33.60	80.17	34.98	91.84	38.09	105.34	28.46
37	46.78	26.62	53.41	28.64	66.79	33.55	73.42	34.33	80.17	35.74	91.84	38.91	105.34	29.08	
39	46.78	27.19	53.41	29.25	66.79	34.27	73.42	35.06	80.17	36.50	91.08	39.42	99.00	27.91	
41	46.78	27.77	53.41	29.87	66.79	34.99	73.42	35.80	78.58	36.53	85.70	37.87	92.25	26.55	
43	46.78	28.34	53.41	30.49	65.57	35.06	72.08	35.87	77.60	36.83	79.07	35.66	85.50	25.12	
46	46.78	28.92	53.41	31.11	65.57	35.78	68.76	34.92	69.75	33.78	76.39	35.16	83.03	24.90	
48	45.92	29.25	52.30	31.39	56.33	31.67	59.29	31.03	62.26	31.06	68.18	32.34	74.11	22.90	
50	43.58	28.31	46.36	28.37	51.81	29.70	54.54	29.10	57.26	29.14	62.72	30.33	68.17	21.48	
52	37.33	24.73	42.31	26.40	47.29	27.64	49.78	27.08	52.27	27.11	57.25	28.23	62.22	19.99	
55	33.77	22.79	38.27	24.34	42.77	25.48	45.02	24.97	47.27	25.00	51.78	26.02	56.28	18.42	

**Abbreviations:**

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

**Notes:**

Shaded cells indicate rating condition.

*Table continued on next page ...*

Table 2-8.13: 32HP cooling capacity(continued)

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC KW	PI KW	TC KW	PI KW	TC KW	PI KW	TC KW	PI KW	TC KW	PI KW	TC KW	PI KW	TC KW	PI KW
70%	-15	40.89	8.57	46.78	9.24	58.44	10.81	64.21	11.06	70.11	11.51	81.77	12.76	91.84	9.34
	-10	40.89	9.81	46.78	10.57	58.44	12.38	64.21	12.66	70.11	13.18	81.77	14.61	91.84	10.69
	-5	40.89	11.07	46.78	11.93	58.44	13.96	64.21	14.28	70.11	14.87	81.77	16.48	91.84	12.06
	-2	40.89	11.83	46.78	12.76	58.44	14.93	64.21	15.27	70.11	15.89	81.77	17.62	91.84	12.89
	0	40.89	12.35	46.78	13.31	58.44	15.58	64.21	15.93	70.11	16.58	81.77	18.38	91.84	13.45
	2	40.89	12.87	46.78	13.87	58.44	16.23	64.21	16.60	70.11	17.28	81.77	19.15	91.84	14.01
	4	40.89	13.39	46.78	14.43	58.44	16.89	64.21	17.27	70.11	17.98	81.77	19.93	91.84	14.58
	6	40.89	13.91	46.78	14.99	58.44	17.55	64.21	17.94	70.11	18.68	81.77	20.71	91.84	15.15
	8	40.89	14.44	46.78	15.56	58.44	18.21	64.21	18.62	70.11	19.39	81.77	21.49	91.84	15.73
	10	40.89	14.97	46.78	16.13	58.44	18.88	64.21	19.31	70.11	20.10	81.77	22.29	91.84	16.31
	12	40.89	15.50	46.78	16.71	58.44	19.56	64.21	20.00	70.11	20.82	81.77	23.08	91.84	16.89
	14	40.89	16.04	46.78	17.29	58.44	20.24	64.21	20.69	70.11	21.54	81.77	23.88	91.84	17.47
	16	40.89	16.58	46.78	17.87	58.44	20.92	64.21	21.39	70.11	22.27	81.77	24.69	91.84	18.06
	18	40.89	17.13	46.78	18.46	58.44	21.61	64.21	22.09	70.11	23.00	81.77	25.50	91.84	18.66
	20	40.89	17.68	46.78	19.05	58.44	22.30	64.21	22.80	70.11	23.74	81.77	26.32	91.84	19.25
	21	40.89	17.95	46.78	19.35	58.44	22.65	64.21	23.16	70.11	24.11	81.77	26.73	91.84	19.55
	23	40.89	18.51	46.78	19.95	58.44	23.34	64.21	23.87	70.11	24.85	81.77	27.55	91.84	20.16
	25	40.89	19.06	46.78	20.55	58.44	24.05	64.21	24.59	70.11	25.60	81.77	28.38	91.84	20.77
	27	40.89	19.62	46.78	21.15	58.44	24.76	64.21	25.32	70.11	26.36	81.77	29.22	91.84	21.38
	29	40.89	20.19	46.78	21.76	58.44	25.47	64.21	26.04	70.11	27.12	81.77	30.06	91.84	21.99
	31	40.89	20.76	46.78	22.37	58.44	26.19	64.21	26.78	70.11	27.88	81.77	30.90	91.84	22.61
	33	40.89	21.33	46.78	22.99	58.44	26.91	64.21	27.52	70.11	28.65	81.77	31.76	91.84	23.23
35	40.89	21.91	46.78	23.61	58.44	27.63	64.21	28.26	70.11	29.42	81.77	32.61	91.84	23.86	
37	40.89	22.38	46.78	24.12	58.44	28.23	64.21	28.87	70.11	30.06	81.77	33.32	91.84	24.38	
39	40.89	22.86	46.78	24.64	58.44	28.84	64.21	29.49	70.11	30.70	81.77	34.03	91.84	24.90	
41	40.89	23.34	46.78	25.16	58.44	29.44	64.21	30.11	70.11	31.35	81.77	34.75	91.84	25.42	
43	40.89	23.82	46.78	25.68	58.44	30.05	64.21	30.73	70.11	32.00	81.77	35.47	91.84	25.94	
46	40.89	24.31	46.78	26.20	58.44	30.67	64.21	31.36	68.63	31.96	72.45	32.07	78.75	22.71	
48	40.89	25.05	46.67	26.93	54.14	29.27	54.90	27.63	57.65	27.66	63.13	28.79	68.63	20.39	
50	40.15	25.08	43.71	25.73	47.02	25.93	49.50	25.40	51.97	25.43	56.92	26.48	61.88	18.75	
52	33.15	21.11	37.49	22.49	41.89	23.55	44.10	23.07	46.30	23.10	50.71	24.05	55.13	17.03	
55	31.19	20.25	33.89	20.73	37.88	21.71	39.88	21.27	41.87	21.29	45.86	22.16	49.85	15.69	
60%	-15	35.11	7.04	40.03	7.56	50.09	8.86	55.13	9.08	60.04	9.43	70.11	10.46	80.17	7.79
	-10	35.11	8.05	40.03	8.65	50.09	10.14	55.13	10.39	60.04	10.79	70.11	11.97	80.17	8.92
	-5	35.11	9.09	40.03	9.76	50.09	11.44	55.13	11.72	60.04	12.17	70.11	13.51	80.17	10.06
	-2	35.11	9.71	40.03	10.43	50.09	12.23	55.13	12.53	60.04	13.01	70.11	14.44	80.17	10.76
	0	35.11	10.14	40.03	10.89	50.09	12.76	55.13	13.07	60.04	13.58	70.11	15.07	80.17	11.22
	2	35.11	10.56	40.03	11.34	50.09	13.30	55.13	13.62	60.04	14.15	70.11	15.70	80.17	11.69
	4	35.11	10.99	40.03	11.80	50.09	13.84	55.13	14.17	60.04	14.72	70.11	16.34	80.17	12.17
	6	35.11	11.42	40.03	12.27	50.09	14.38	55.13	14.73	60.04	15.30	70.11	16.98	80.17	12.64
	8	35.11	11.85	40.03	12.73	50.09	14.92	55.13	15.29	60.04	15.88	70.11	17.62	80.17	13.12
	10	35.11	12.29	40.03	13.20	50.09	15.47	55.13	15.85	60.04	16.46	70.11	18.27	80.17	13.61
	12	35.11	8.75	40.03	9.40	50.09	11.02	55.13	11.29	60.04	11.73	70.11	13.01	80.17	14.09
	14	35.11	9.06	40.03	9.73	50.09	11.41	55.13	11.68	60.04	12.13	70.11	13.47	80.17	14.58
	16	35.11	9.36	40.03	10.06	50.09	11.79	55.13	12.08	60.04	12.54	70.11	13.92	80.17	15.07
	18	35.11	9.67	40.03	10.39	50.09	12.18	55.13	12.48	60.04	12.96	70.11	14.38	80.17	15.57
	20	35.11	9.98	40.03	10.72	50.09	12.57	55.13	12.88	60.04	13.37	70.11	14.84	80.17	16.07
	21	35.11	10.14	40.03	10.89	50.09	12.77	55.13	13.08	60.04	13.58	70.11	15.07	80.17	16.32
	23	35.11	10.45	40.03	11.23	50.09	13.16	55.13	13.48	60.04	14.00	70.11	15.54	80.17	16.82
	25	35.11	10.77	40.03	11.56	50.09	13.56	55.13	13.89	60.04	14.42	70.11	16.00	80.17	17.33
	27	35.11	11.08	40.03	11.90	50.09	13.95	55.13	14.29	60.04	14.84	70.11	16.47	80.17	17.84
	29	35.11	11.40	40.03	12.25	50.09	14.36	55.13	14.71	60.04	15.27	70.11	16.95	80.17	18.35
	31	35.11	11.72	40.03	12.59	50.09	14.76	55.13	15.12	60.04	15.70	70.11	17.43	80.17	18.87
	33	35.11	12.05	40.03	12.94	50.09	15.17	55.13	15.54	60.04	16.13	70.11	17.91	80.17	19.39
35	35.11	12.37	40.03	13.29	50.09	15.58	55.13	15.96	60.04	16.57	70.11	18.39	80.17	19.91	
37	35.11	12.64	40.03	13.58	50.09	15.91	55.13	16.30	60.04	16.93	70.11	18.79	80.17	20.35	
39	35.11	12.91	40.03	13.87	50.09	16.25	55.13	16.65	60.04	17.29	70.11	19.19	80.17	20.78	
41	35.11	13.18	40.03	14.16	50.09	16.60	55.13	17.00	60.04	17.65	70.11	19.59	80.17	21.22	
43	35.11	13.45	40.03	14.45	50.09	16.94	55.13	17.35	60.04	18.02	70.11	20.00	80.17	21.66	
46	35.11	13.73	40.03	14.75	50.09	17.29	55.13	17.71	60.04	18.39	70.11	20.41	78.75	21.71	
48	35.11	14.15	40.03	15.19	50.09	17.81	54.90	18.17	57.65	18.19	63.13	18.94	68.63	19.49	
50	35.11	14.43	40.03	15.49	47.02	17.05	49.50	16.71	51.97	16.73	56.92	17.41	61.88	17.92	
52	33.08	13.85	37.49	14.79	41.89	15.49	44.10	15.17	46.30	15.19	50.71	15.81	55.13	16.28	
55	30.81	13.15	32.90	13.23	36.77	13.85	38.70	13.57	40.63	13.59	44.51	14.15	48.38	14.56	

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Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

Table2-8.13:32HP cooling capacity(continued)

CR	Outdoor air temp. (°CDB)	Indoor air temp. (°C DB/WD)													
		20.8/14		23.3/16		25.8/18		27/19		28.2/20		30.7/22		32/24	
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
50%	-15	29.23	3.83	33.40	4.12	41.74	4.82	45.92	4.94	50.09	5.13	58.44	5.69	66.79	6.16
	-10	29.23	4.38	33.40	4.71	41.74	5.52	45.92	5.65	50.09	5.88	58.44	6.52	66.79	7.05
	-5	29.23	4.94	33.40	5.32	41.74	6.23	45.92	6.37	50.09	6.63	58.44	7.35	66.79	7.96
	-2	29.23	5.28	33.40	5.68	41.74	6.66	45.92	6.81	50.09	7.09	58.44	7.86	66.79	8.51
	0	29.23	5.51	33.40	5.93	41.74	6.94	45.92	7.11	50.09	7.40	58.44	8.20	66.79	8.88
	2	29.23	5.74	33.40	6.18	41.74	7.24	45.92	7.41	50.09	7.71	58.44	8.54	66.79	9.25
	4	29.23	5.97	33.40	6.43	41.74	7.53	45.92	7.71	50.09	8.02	58.44	8.89	66.79	9.62
	6	29.23	6.21	33.40	6.68	41.74	7.82	45.92	8.01	50.09	8.33	58.44	9.24	66.79	10.00
	8	29.23	6.44	33.40	6.94	41.74	8.12	45.92	8.31	50.09	8.65	58.44	9.59	66.79	10.38
	10	29.23	6.68	33.40	7.19	41.74	8.42	45.92	8.62	50.09	8.97	58.44	9.94	66.79	10.76
	12	29.23	6.92	33.40	7.45	41.74	8.72	45.92	8.93	50.09	9.29	58.44	10.30	66.79	11.14
	14	29.23	7.16	33.40	7.71	41.74	9.02	45.92	9.24	50.09	9.61	58.44	10.65	66.79	11.53
	16	29.23	7.40	33.40	7.97	41.74	9.33	45.92	9.55	50.09	9.93	58.44	11.01	66.79	11.92
	18	29.23	7.64	33.40	8.23	41.74	9.63	45.92	9.86	50.09	10.26	58.44	11.38	66.79	12.31
	20	29.23	7.89	33.40	8.49	41.74	9.94	45.92	10.18	50.09	10.59	58.44	11.74	66.79	12.71
	21	29.23	8.01	33.40	8.62	41.74	10.10	45.92	10.34	50.09	10.75	58.44	11.92	66.79	12.90
	23	29.23	8.26	33.40	8.89	41.74	10.41	45.92	10.66	50.09	11.08	58.44	12.29	66.79	13.30
	25	29.23	8.51	33.40	9.16	41.74	10.72	45.92	10.98	50.09	11.42	58.44	12.66	66.79	13.70
	27	29.23	8.76	33.40	9.43	41.74	11.04	45.92	11.30	50.09	11.75	58.44	13.03	66.79	14.11
	29	29.23	9.01	33.40	9.70	41.74	11.35	45.92	11.63	50.09	12.09	58.44	13.41	66.79	14.51
	31	29.23	9.26	33.40	9.97	41.74	11.67	45.92	11.95	50.09	12.43	58.44	13.79	66.79	14.92
	33	29.23	9.52	33.40	10.25	41.74	12.00	45.92	12.28	50.09	12.78	58.44	14.17	66.79	15.33
	35	29.23	9.77	33.40	10.52	41.74	12.32	45.92	12.61	50.09	13.12	58.44	14.55	66.79	15.75
	37	29.23	9.99	33.40	10.75	41.74	12.59	45.92	12.89	50.09	13.41	58.44	14.86	66.79	16.09
	39	29.23	10.20	33.40	10.98	41.74	12.86	45.92	13.16	50.09	13.69	58.44	15.18	66.79	16.43
41	29.23	10.41	33.40	11.21	41.74	13.13	45.92	13.44	50.09	13.98	58.44	15.50	66.79	16.78	
43	29.23	10.63	33.40	11.44	41.74	13.40	45.92	13.72	50.09	14.27	58.44	15.82	66.79	17.13	
46	29.23	10.85	33.40	11.68	41.74	13.67	45.92	14.00	50.09	14.56	58.44	16.15	66.79	17.48	
48	29.23	11.18	33.40	12.03	41.74	14.09	45.92	14.42	50.09	15.00	58.44	16.64	66.79	18.01	
50	29.23	11.40	33.40	12.27	41.74	14.37	45.92	14.71	50.09	15.30	56.92	16.53	61.88	17.01	
52	29.23	11.62	33.40	12.51	41.74	14.65	44.10	14.40	46.30	14.42	50.71	15.01	55.13	15.45	
55	29.23	11.84	32.90	12.56	36.77	13.15	38.70	12.88	40.63	12.90	44.51	13.43	48.38	13.82	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

## 8.2 Heating Capacity Tables

Table 2-8.14: 8HP heating capacity

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
130%	-30.0	-30.5	19.02	6.85	18.65	7.06	18.29	7.29	18.10	7.46	17.92	7.31	17.56	6.83
	-25.0	-25.4	19.66	7.23	19.37	7.47	19.08	7.71	18.94	7.87	18.67	7.80	17.79	7.42
	-19.8	-20.0	20.26	7.62	19.95	7.85	19.64	8.04	19.48	8.16	19.32	8.26	19.01	8.50
	-18.8	-19.0	20.36	7.69	20.05	7.89	19.73	8.10	19.57	8.19	19.41	8.32	19.09	8.54
	-16.7	-17.0	20.56	7.79	20.23	7.99	19.91	8.18	19.74	8.29	19.58	8.38	19.25	8.62
	-13.7	-15.0	20.74	7.92	20.41	8.13	20.08	8.32	19.91	8.43	19.74	8.53	19.41	8.75
	-11.8	-13.0	20.92	7.99	20.58	8.19	20.24	8.38	20.06	8.50	19.89	8.58	19.55	8.79
	-9.8	-11.0	21.08	8.06	20.74	8.25	20.39	8.43	20.21	8.55	20.04	8.64	19.59	8.58
	-9.5	-10.0	21.16	8.05	20.81	8.23	20.46	8.43	20.28	8.51	20.11	8.61	19.58	8.32
	-8.5	-9.1	21.23	8.08	20.88	8.27	20.52	8.44	20.34	8.54	20.17	8.64	19.58	8.18
	-7.0	-7.6	21.34	8.12	20.98	8.30	20.62	8.49	20.44	8.59	20.21	8.53	19.58	7.93
	-5.0	-5.6	21.09	8.02	20.73	8.20	20.38	8.38	20.15	8.32	19.88	8.13	19.26	7.52
	-3.0	-3.7	21.85	8.19	21.47	8.38	21.06	8.41	20.78	8.21	20.50	8.01	19.84	7.36
	0.0	-0.7	23.72	8.71	23.32	8.91	22.76	8.60	22.46	8.38	22.13	8.17	21.41	7.43
	3.0	2.2	26.72	9.64	26.16	9.49	25.47	9.12	25.07	8.86	24.66	8.57	23.80	7.72
	5.0	4.1	29.09	10.06	28.45	9.86	27.63	9.43	27.17	9.12	26.70	8.81	25.72	7.89
	7.0	6.0	33.24	10.87	32.54	10.76	31.48	10.22	30.92	9.82	29.91	9.30	28.87	8.38
	9.0	7.9	34.12	10.65	33.37	10.52	32.24	9.90	31.19	9.37	30.73	9.01	29.68	8.13
	11.0	9.8	34.97	10.37	34.15	10.22	32.98	9.57	32.02	9.06	31.36	8.72	29.68	7.63
	13.0	11.8	35.83	10.08	34.92	9.85	33.34	9.13	32.64	8.74	32.31	8.46	29.68	7.10
15.0	13.7	36.65	9.74	35.68	9.50	33.93	8.77	33.59	8.47	32.65	8.03	29.68	6.60	
18.0	16.6	37.17	8.73	36.08	8.12	35.37	7.61	33.59	7.07	32.65	6.70	29.68	5.93	
21.0	19.5	38.29	8.41	37.55	7.83	35.37	6.97	33.59	6.40	32.65	6.14	29.68	5.47	
24.0	22.4	39.79	8.11	37.55	7.14	35.37	6.32	33.59	5.88	32.65	5.64	29.68	5.00	
27.0	25.3	39.79	7.48	37.55	6.49	35.37	5.73	33.59	5.40	32.65	5.15	29.68	4.54	
30.0	28.1	41.23	7.15	37.55	5.91	35.37	5.20	33.59	4.96	32.65	4.71	29.68	4.13	
120%	-30.0	-30.5	18.18	6.76	17.97	7.04	17.67	7.29	17.31	6.94	17.13	6.80	16.78	6.42
	-25.0	-25.4	18.98	7.23	18.70	7.47	18.43	7.72	18.11	7.56	17.81	7.47	16.99	7.15
	-19.8	-20.0	19.53	7.61	19.23	7.83	18.92	8.06	18.77	8.16	18.62	8.25	18.32	8.49
	-18.8	-19.0	19.62	7.67	19.31	7.89	19.01	8.09	18.85	8.20	18.70	8.30	18.39	8.54
	-16.7	-17.0	19.80	7.78	19.49	7.97	19.17	8.17	19.01	8.29	18.86	8.41	18.54	8.63
	-13.7	-15.0	19.97	7.92	19.65	8.11	19.33	8.32	19.16	8.43	19.00	8.54	18.60	8.53
	-11.8	-13.0	20.13	7.99	19.80	8.20	19.47	8.39	19.31	8.48	19.14	8.60	18.64	8.31
	-9.8	-11.0	20.28	8.06	19.95	8.26	19.61	8.44	19.44	8.55	19.21	8.46	18.67	8.08
	-9.5	-10.0	20.36	8.05	20.02	8.25	19.68	8.43	19.51	8.52	19.21	8.25	18.63	7.77
	-8.5	-9.1	20.42	8.09	20.08	8.28	19.74	8.47	19.51	8.39	19.21	8.12	18.60	7.54
	-7.0	-7.6	20.52	8.13	20.17	8.32	19.80	8.43	19.52	8.17	19.21	7.86	18.60	7.28
	-5.0	-5.6	20.27	8.03	19.93	8.23	19.47	8.02	19.20	7.78	18.90	7.48	18.29	6.87
	-3.0	-3.7	21.00	8.24	20.60	8.26	20.08	7.91	19.79	7.65	19.47	7.32	18.82	6.69
	0.0	-0.7	22.78	8.72	22.27	8.46	21.70	8.09	21.37	7.79	21.03	7.41	20.29	6.75
	3.0	2.2	25.57	9.29	24.95	9.00	24.20	8.51	23.81	8.15	23.41	7.75	22.58	7.03
	5.0	4.1	27.81	9.66	27.07	9.30	26.23	8.75	25.79	8.36	25.33	7.90	24.39	7.18
	7.0	6.0	31.83	10.55	30.89	10.08	29.84	9.41	28.88	8.81	28.45	8.40	24.39	6.74
	9.0	7.9	32.66	10.29	31.64	9.78	30.11	8.94	29.68	8.58	29.08	8.10	24.39	6.29
	11.0	9.8	33.45	9.99	32.37	9.46	30.92	8.70	30.29	8.27	29.98	7.86	24.39	5.82
	13.0	11.8	34.21	9.67	32.62	8.99	31.52	8.36	31.20	8.02	30.13	7.35	24.39	5.46
15.0	13.7	34.96	9.32	33.44	8.72	32.44	8.10	31.51	7.56	30.13	6.85	24.39	5.21	
18.0	16.6	35.17	7.93	34.49	7.45	32.44	6.71	31.51	6.40	30.13	6.07	24.39	4.82	
21.0	19.5	36.60	7.58	34.49	6.82	32.44	6.17	31.51	5.91	30.13	5.59	24.39	4.44	
24.0	22.4	38.04	7.21	34.49	6.19	32.44	5.65	31.51	5.43	30.13	5.11	24.39	4.05	
27.0	25.3	38.04	6.50	34.49	5.61	32.44	5.16	31.51	4.92	30.13	4.69	24.39	3.70	
30.0	28.1	38.04	5.87	34.49	5.09	32.44	4.72	31.51	4.46	30.13	4.31	24.39	3.38	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

Table2-8.14:8HP heating capacity(continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	
110%	-30.0	-30.5	17.39	6.70	17.36	7.10	16.51	6.65	16.35	6.44	16.18	6.20	15.85	5.84
	-25.0	-25.4	18.15	7.18	17.88	7.44	17.43	7.36	17.15	7.25	16.82	7.08	16.03	6.74
	-19.8	-20.0	18.64	7.58	18.35	7.77	18.06	8.00	17.91	8.12	17.77	8.21	17.44	8.35
	-18.8	-19.0	18.72	7.64	18.43	7.82	18.13	8.04	17.99	8.15	17.84	8.28	17.47	8.33
	-16.7	-17.0	18.88	7.73	18.58	7.92	18.28	8.15	18.13	8.26	17.98	8.35	17.49	8.10
	-13.7	-15.0	19.04	7.89	18.73	8.09	18.42	8.29	18.26	8.39	18.06	8.35	17.52	7.94
	-11.8	-13.0	19.18	7.96	18.86	8.14	18.55	8.35	18.34	8.29	18.09	8.12	17.55	7.70
	-9.8	-11.0	19.32	8.03	18.99	8.22	18.62	8.22	18.37	8.09	18.12	7.91	17.57	7.45
	-9.5	-10.0	19.38	8.03	19.06	8.21	18.62	8.02	18.34	7.79	18.08	7.60	17.52	7.15
	-8.5	-9.1	19.44	8.05	19.11	8.25	18.61	7.90	18.34	7.64	18.06	7.36	17.47	6.85
	-7.0	-7.6	19.53	8.11	19.15	8.15	18.61	7.65	18.34	7.40	18.05	7.13	17.47	6.62
	-5.0	-5.6	19.28	8.02	18.83	7.78	18.31	7.28	18.03	7.01	17.75	6.73	17.17	6.25
	-3.0	-3.7	19.90	7.96	19.42	7.66	18.87	7.12	18.58	6.85	18.28	6.54	17.66	6.09
	0.0	-0.7	21.51	8.17	21.00	7.84	20.37	7.23	20.05	6.90	19.71	6.63	19.01	6.12
	3.0	2.2	24.13	8.69	23.44	8.25	22.73	7.56	22.36	7.22	21.98	6.93	21.15	6.34
	5.0	4.1	26.20	8.99	25.42	8.48	24.62	7.74	24.20	7.39	23.77	7.07	22.75	6.40
	7.0	6.0	29.92	9.74	28.96	9.16	27.56	8.20	27.17	7.83	26.62	7.42	22.75	5.95
	9.0	7.9	30.65	9.45	29.66	8.84	28.32	7.96	27.75	7.52	27.47	7.18	22.75	5.65
	11.0	9.8	31.37	9.12	29.91	8.44	28.90	7.64	28.61	7.26	27.47	6.67	22.75	5.36
	13.0	11.8	32.08	8.80	30.68	8.16	29.77	7.34	28.61	6.73	27.47	6.23	22.75	5.07
	15.0	13.7	32.32	8.36	31.25	7.80	29.77	6.80	28.61	6.24	27.47	5.93	22.75	4.83
18.0	16.6	33.22	7.16	32.58	6.75	29.77	6.03	28.61	5.73	27.47	5.48	22.75	4.44	
21.0	19.5	34.58	6.83	32.58	6.17	29.77	5.55	28.61	5.25	27.47	5.00	22.75	4.11	
24.0	22.4	34.58	6.20	32.58	5.68	29.77	5.08	28.61	4.83	27.47	4.62	22.75	3.75	
27.0	25.3	34.58	5.64	32.58	5.19	29.77	4.66	28.61	4.41	27.47	4.17	22.75	3.37	
30.0	28.1	34.58	5.13	32.58	4.74	29.77	4.27	28.61	4.02	27.47	3.76	22.75	3.03	
100%	-30.0	-30.5	17.29	7.00	16.74	6.70	16.42	6.34	16.25	6.05	16.09	5.90	15.76	5.96
	-25.0	-25.4	18.05	7.50	17.59	7.42	17.05	7.22	16.76	7.06	16.27	6.84	15.76	6.65
	-19.8	-20.0	18.53	7.89	18.24	8.12	17.96	8.34	17.82	8.48	17.63	8.49	17.06	8.05
	-18.8	-19.0	18.61	7.95	18.32	8.17	18.03	8.40	17.89	8.53	17.67	8.46	17.07	7.92
	-16.7	-17.0	18.77	8.08	18.47	8.29	18.18	8.53	17.95	8.42	17.69	8.22	17.08	7.68
	-13.7	-15.0	18.92	8.24	18.62	8.46	18.23	8.44	17.98	8.26	17.72	8.08	17.10	7.48
	-11.8	-13.0	19.06	8.33	18.75	8.53	18.27	8.23	18.01	8.04	17.75	7.82	17.12	7.22
	-9.8	-11.0	19.20	8.41	18.79	8.34	18.30	8.01	18.04	7.79	17.77	7.57	17.13	6.94
	-9.5	-10.0	19.26	8.43	18.77	8.09	18.26	7.69	18.00	7.48	17.72	7.26	17.07	6.65
	-8.5	-9.1	19.30	8.42	18.78	7.95	18.23	7.45	17.95	7.21	17.66	6.96	17.07	6.54
	-7.0	-7.6	19.30	8.17	18.78	7.71	18.23	7.20	17.95	6.95	17.67	6.73	17.07	6.32
	-5.0	-5.6	18.99	7.80	18.47	7.31	17.93	6.81	17.65	6.56	17.36	6.36	16.78	5.97
	-3.0	-3.7	19.58	7.68	19.03	7.16	18.45	6.62	18.16	6.40	17.86	6.18	17.24	5.79
	0.0	-0.7	21.16	7.87	20.55	7.27	19.89	6.71	19.56	6.47	19.22	6.22	18.52	5.78
	3.0	2.2	23.61	8.27	22.92	7.59	22.18	6.99	21.78	6.71	21.36	6.45	20.51	5.94
	5.0	4.1	25.59	8.50	24.80	7.79	23.94	7.13	23.47	6.83	22.68	6.41	21.93	5.95
	7.0	6.0	29.11	9.12	27.84	8.27	27.00	7.56	23.47	6.37	22.68	5.96	21.93	5.65
	9.0	7.9	29.39	8.71	28.42	7.93	27.00	7.05	23.47	5.93	22.68	5.66	21.93	5.34
	11.0	9.8	30.17	8.45	29.30	7.67	27.00	6.54	23.47	5.59	22.68	5.36	21.93	5.08
	13.0	11.8	30.78	8.11	29.30	7.16	27.00	6.10	23.47	5.28	22.68	5.08	21.93	4.83
	15.0	13.7	31.67	7.82	29.30	6.62	27.00	5.82	23.47	5.04	22.68	4.84	21.93	4.63
18.0	16.6	31.67	6.52	29.30	5.93	27.00	5.36	23.47	4.65	22.68	4.45	21.93	4.27	
21.0	19.5	31.67	6.02	29.30	5.48	27.00	4.96	23.47	4.27	22.68	4.12	21.93	3.91	
24.0	22.4	31.67	5.51	29.30	5.00	27.00	4.52	23.47	3.89	22.68	3.75	21.93	3.56	
27.0	25.3	31.67	5.02	29.30	4.54	27.00	4.13	23.47	3.52	22.68	3.38	21.93	3.18	
30.0	28.1	31.67	4.57	29.30	4.13	27.00	3.78	23.47	3.19	22.68	3.04	21.93	2.84	

**Abbreviations:**

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

**Notes:**

Shaded cells indicate rating condition.

Table continued on next page ...

Table2-8.14:8HP heating capacity(continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
90%	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
	-30.0	-30.5	15.84	6.36	15.07	5.81	14.77	5.52	14.63	5.46	14.48	5.39	14.18	5.58
	-25.0	-25.4	16.47	7.01	15.99	6.82	15.49	6.59	15.21	6.43	14.93	6.27	14.30	6.09
	-19.8	-20.0	17.00	7.68	16.73	7.89	16.40	7.95	16.15	7.74	15.89	7.52	15.35	7.08
	-18.8	-19.0	17.06	7.73	16.79	7.97	16.40	7.83	16.15	7.59	15.89	7.39	15.35	6.93
	-16.7	-17.0	17.19	7.84	16.89	7.99	16.44	7.66	16.18	7.43	15.91	7.19	15.37	6.72
	-13.7	-15.0	17.31	8.02	16.93	7.89	16.46	7.52	16.20	7.27	15.93	7.00	15.37	6.50
	-11.8	-13.0	17.37	7.90	16.96	7.68	16.48	7.28	16.22	7.02	15.94	6.76	15.36	6.27
	-9.8	-11.0	17.39	7.68	16.98	7.47	16.50	7.05	16.23	6.76	15.95	6.48	15.35	6.02
	-9.5	-10.0	17.37	7.41	16.95	7.16	16.46	6.74	16.18	6.45	15.89	6.19	15.35	5.85
	-8.5	-9.1	17.37	7.28	16.90	6.92	16.41	6.44	16.15	6.24	15.89	6.10	15.35	5.74
	-7.0	-7.6	17.37	7.06	16.89	6.64	16.40	6.24	16.15	6.07	15.89	5.92	15.35	5.57
	-5.0	-5.6	17.08	6.71	16.61	6.26	16.12	5.88	15.88	5.73	15.62	5.56	15.09	5.25
	-3.0	-3.7	17.60	6.55	17.10	6.10	16.58	5.74	16.33	5.58	16.06	5.42	15.51	5.09
	0.0	-0.7	19.01	6.65	18.44	6.16	17.86	5.78	17.56	5.59	17.27	5.40	16.62	5.05
	3.0	2.2	21.25	6.99	20.58	6.44	19.88	5.99	19.53	5.77	19.16	5.53	18.10	5.10
	5.0	4.1	23.03	7.17	22.24	6.56	21.41	6.02	20.98	5.77	20.33	5.50	18.10	4.88
	7.0	6.0	26.19	7.67	24.79	6.85	21.41	5.60	20.98	5.44	20.33	5.27	18.10	4.60
	9.0	7.9	26.42	7.26	25.58	6.59	21.41	5.32	20.98	5.16	20.33	4.95	18.10	4.34
	11.0	9.8	27.09	6.97	26.37	6.29	21.41	5.06	20.98	4.96	20.33	4.75	18.10	4.15
13.0	11.8	27.70	6.60	26.37	6.00	21.41	4.81	20.98	4.69	20.33	4.51	18.10	3.93	
15.0	13.7	28.51	6.26	26.37	5.69	21.41	4.59	20.98	4.48	20.33	4.31	19.68	4.08	
18.0	16.6	28.51	5.77	26.37	5.25	21.41	4.22	20.98	4.14	20.33	3.97	19.68	3.75	
21.0	19.5	28.51	5.29	26.37	4.83	21.41	3.88	20.98	3.77	20.33	3.65	19.68	3.44	
24.0	22.4	28.51	4.84	26.37	4.43	21.41	3.55	20.98	3.43	20.33	3.31	19.68	3.11	
27.0	25.3	28.51	4.42	26.37	4.01	21.41	3.19	20.98	3.08	20.33	2.93	19.68	2.73	
30.0	28.1	28.51	4.03	26.37	3.64	21.41	2.87	20.98	2.76	20.33	2.59	19.68	2.40	
80%	-30.0	-30.5	13.66	5.08	13.40	5.01	13.13	4.98	13.00	4.96	12.87	5.09	12.61	5.37
	-25.0	-25.4	14.71	6.26	14.29	6.06	13.85	5.85	13.62	5.74	13.40	5.72	12.75	5.56
	-19.8	-20.0	15.40	7.49	15.01	7.23	14.58	6.86	14.35	6.68	14.12	6.49	13.63	6.10
	-18.8	-19.0	15.44	7.49	15.01	7.12	14.58	6.76	14.35	6.55	14.12	6.38	13.64	6.01
	-16.7	-17.0	15.46	7.32	15.02	6.92	14.59	6.53	14.36	6.33	14.12	6.12	13.64	5.85
	-13.7	-15.0	15.48	7.20	15.04	6.78	14.60	6.36	14.37	6.13	14.12	5.96	13.64	5.69
	-11.8	-13.0	15.50	6.99	15.06	6.54	14.61	6.10	14.35	5.92	14.12	5.75	13.64	5.45
	-9.8	-11.0	15.52	6.78	15.07	6.31	14.60	5.86	14.35	5.67	14.12	5.54	13.64	5.22
	-9.5	-10.0	15.49	6.50	15.03	6.00	14.58	5.65	14.35	5.52	14.12	5.40	13.63	5.10
	-8.5	-9.1	15.45	6.24	15.01	5.85	14.58	5.57	14.35	5.42	14.12	5.29	13.64	4.99
	-7.0	-7.6	15.44	5.99	15.01	5.69	14.58	5.41	14.35	5.26	14.12	5.11	13.64	4.82
	-5.0	-5.6	15.16	5.64	14.75	5.35	14.32	5.08	14.10	4.94	13.88	4.82	13.41	4.54
	-3.0	-3.7	15.61	5.49	15.18	5.22	14.74	4.94	14.51	4.83	14.27	4.67	13.78	4.47
	0.0	-0.7	16.84	5.55	16.37	5.27	15.87	4.97	15.59	4.78	15.33	4.68	14.75	4.47
	3.0	2.2	18.82	5.81	18.25	5.45	17.64	5.11	17.28	4.95	16.96	4.83	16.08	4.53
	5.0	4.1	20.34	5.88	19.68	5.49	18.93	5.13	18.34	4.97	18.07	4.88	16.08	4.34
	7.0	6.0	22.75	6.14	22.03	5.76	18.93	4.90	18.34	4.76	18.07	4.61	17.41	4.39
	9.0	7.9	23.18	5.79	22.74	5.63	18.93	4.62	18.34	4.44	18.07	4.36	17.41	4.17
	11.0	9.8	23.90	5.71	22.74	5.37	18.93	4.40	18.34	4.22	18.07	4.14	17.41	3.94
	13.0	11.8	24.62	5.58	22.74	5.11	18.93	4.19	18.34	4.02	19.24	4.20	17.41	3.73
15.0	13.7	24.62	5.31	22.74	4.85	18.93	3.98	18.34	3.81	19.24	4.00	17.41	3.54	
18.0	16.6	24.62	4.89	22.74	4.49	18.93	3.72	18.34	3.55	19.24	3.64	17.41	3.26	
21.0	19.5	24.62	4.52	22.74	4.12	18.93	3.40	18.34	3.24	19.24	3.42	17.41	2.96	
24.0	22.4	24.62	4.11	22.74	3.76	18.93	3.06	18.34	2.95	19.24	3.06	17.41	2.68	
27.0	25.3	24.62	3.70	22.74	3.36	18.93	2.70	18.34	2.59	19.24	2.68	17.41	2.35	
30.0	28.1	24.62	3.33	22.74	3.00	18.93	2.38	18.34	2.26	19.24	2.36	17.41	2.06	

Abbreviations:  
 CR: Combination ratio  
 TC: Total capacity (kW)  
 PI: Power input (compressor + outdoor fan motor) (kW)  
 Notes:  
 Shaded cells indicate rating condition.

Table continued on next page ...

Table2-8.14:8HP heating capacity(continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
70%	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
	-30.0	-30.5	12.13	4.60	11.72	4.45	11.49	4.68	11.38	4.78	11.26	4.86	11.03	4.99
	-25.0	-25.4	12.97	5.51	12.58	5.29	12.22	5.26	12.03	5.23	11.83	5.21	11.43	5.15
	-19.8	-20.0	13.50	6.42	13.13	6.11	12.75	5.79	12.56	5.65	12.35	5.54	11.93	5.36
	-18.8	-19.0	13.50	6.32	13.13	6.01	12.75	5.68	12.55	5.58	12.35	5.48	11.92	5.27
	-16.7	-17.0	13.52	6.15	13.14	5.81	12.75	5.52	12.55	5.42	12.35	5.31	11.93	5.08
	-13.7	-15.0	13.53	6.00	13.15	5.64	12.75	5.36	12.56	5.26	12.35	5.15	11.92	4.91
	-11.8	-13.0	13.54	5.77	13.14	5.42	12.75	5.17	12.56	5.05	12.35	4.93	11.92	4.69
	-9.8	-11.0	13.54	5.53	13.13	5.20	12.75	4.97	12.55	4.85	12.35	4.73	11.93	4.46
	-9.5	-10.0	13.50	5.29	13.13	5.08	12.75	4.84	12.55	4.72	12.35	4.58	11.92	4.37
	-8.5	-9.1	13.50	5.20	13.13	4.98	12.75	4.75	12.55	4.62	12.35	4.48	11.93	4.34
	-7.0	-7.6	13.50	5.04	13.13	4.83	12.75	4.60	12.55	4.46	12.35	4.36	11.93	4.23
	-5.0	-5.6	13.26	4.75	12.90	4.54	12.53	4.31	12.33	4.22	12.14	4.14	11.72	4.00
	-3.0	-3.7	13.65	4.63	13.28	4.40	12.89	4.20	12.69	4.14	12.48	4.07	12.05	3.93
	0.0	-0.7	14.71	4.62	14.28	4.39	13.83	4.21	13.62	4.14	13.38	4.05	12.89	3.90
	3.0	2.2	16.40	4.76	15.87	4.53	15.34	4.36	15.08	4.28	14.80	4.18	14.06	3.98
	5.0	4.1	17.67	4.83	17.12	4.64	16.55	4.47	16.04	4.33	15.81	4.28	15.35	4.13
	7.0	6.0	19.86	5.18	19.28	4.96	18.13	4.60	16.04	4.03	18.52	4.64	15.35	3.79
	9.0	7.9	20.28	4.97	19.74	4.82	18.13	4.37	16.04	3.83	18.52	4.44	15.35	3.62
	11.0	9.8	20.91	4.90	19.74	4.57	18.13	4.14	16.04	3.66	18.52	4.17	15.35	3.43
	13.0	11.8	20.91	4.64	19.74	4.32	18.13	3.93	16.04	3.44	18.52	3.95	15.35	3.25
	15.0	13.7	20.91	4.40	19.74	4.11	18.13	3.71	17.44	3.57	18.52	3.74	15.35	3.09
18.0	16.6	20.91	4.14	19.74	3.83	18.13	3.46	17.44	3.28	18.52	3.45	15.35	2.82	
21.0	19.5	20.91	3.78	19.74	3.50	18.13	3.14	17.44	2.97	18.52	3.13	15.35	2.56	
24.0	22.4	20.91	3.43	19.74	3.20	18.13	2.81	17.44	2.69	18.52	2.83	15.98	2.67	
27.0	25.3	20.91	3.03	19.74	2.79	18.13	2.49	17.44	2.38	18.52	2.80	15.98	2.31	
30.0	28.1	20.91	2.67	19.74	2.43	18.13	2.21	17.44	2.10	18.53	2.77	15.98	2.00	
60%	-30.0	-30.5	10.72	4.32	10.47	4.43	9.99	4.41	9.85	4.43	9.65	4.49	9.46	4.66
	-25.0	-25.4	11.19	4.80	10.90	4.77	10.56	4.72	10.39	4.68	10.21	4.67	9.89	4.65
	-19.8	-20.0	11.57	5.28	11.26	5.09	10.93	4.93	10.75	4.85	10.58	4.76	10.22	4.59
	-18.8	-19.0	11.57	5.18	11.25	5.01	10.93	4.85	10.76	4.77	10.58	4.67	10.22	4.51
	-16.7	-17.0	11.57	5.03	11.25	4.86	10.92	4.69	10.75	4.59	10.58	4.48	10.21	4.30
	-13.7	-15.0	11.57	4.88	11.25	4.72	10.93	4.53	10.75	4.44	10.58	4.33	10.22	4.15
	-11.8	-13.0	11.57	4.72	11.25	4.54	10.93	4.32	10.76	4.24	10.58	4.13	10.23	4.05
	-9.8	-11.0	11.57	4.53	11.25	4.34	10.92	4.14	10.76	4.04	10.58	3.99	10.22	3.91
	-9.5	-10.0	11.57	4.41	11.25	4.21	10.92	4.03	10.76	3.98	10.58	3.93	10.22	3.83
	-8.5	-9.1	11.57	4.32	11.25	4.11	10.92	3.96	10.75	3.91	10.58	3.87	10.22	3.78
	-7.0	-7.6	11.57	4.19	11.25	3.97	10.93	3.88	10.76	3.83	10.58	3.76	10.21	3.65
	-5.0	-5.6	11.36	3.92	11.05	3.80	10.73	3.68	10.57	3.63	10.40	3.58	10.05	3.49
	-3.0	-3.7	11.70	3.83	11.38	3.74	11.04	3.60	10.87	3.58	10.69	3.52	10.32	3.40
	0.0	-0.7	12.58	3.85	12.22	3.75	11.85	3.61	11.66	3.56	11.46	3.51	11.05	3.40
	3.0	2.2	14.00	4.00	13.58	3.87	13.14	3.74	12.92	3.68	12.68	3.61	12.05	3.44
	5.0	4.1	15.15	4.13	14.68	3.99	14.17	3.85	13.74	3.73	13.55	3.70	13.16	3.51
	7.0	6.0	17.02	4.35	16.52	4.17	16.20	4.05	13.74	3.42	13.55	3.35	13.16	3.23
	9.0	7.9	17.39	4.22	16.52	3.96	16.72	3.99	13.74	3.28	13.55	3.19	13.16	3.07
	11.0	9.8	17.93	4.13	16.81	3.85	17.24	3.89	13.74	3.10	13.55	3.04	13.16	2.93
	13.0	11.8	18.05	3.93	16.81	3.63	17.24	3.68	13.74	2.94	13.55	2.88	13.16	2.77
	15.0	13.7	18.05	3.72	16.81	3.44	17.24	3.50	13.74	2.79	13.55	2.74	13.16	2.64
	18.0	16.6	18.05	3.45	16.81	3.17	17.24	3.37	15.75	3.17	15.08	3.03	13.70	2.69
21.0	19.5	18.05	3.14	16.81	2.89	17.24	2.92	15.75	2.68	15.08	2.56	13.70	2.27	
24.0	22.4	18.05	2.83	16.81	2.61	17.24	2.61	15.75	2.65	15.08	2.53	13.70	2.22	
27.0	25.3	18.05	2.49	16.81	2.27	17.24	2.57	15.75	2.31	15.08	2.17	13.70	1.95	
30.0	28.1	18.05	2.19	16.81	1.98	17.45	2.57	15.75	2.02	15.08	1.87	13.70	1.72	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

# MDV8 ECO VRF 50Hz



Table 2-8.14: 8HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
50%	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
	-30.0	-30.5	9.13	4.07	8.89	4.13	8.65	4.23	8.49	4.23	8.32	4.21	7.88	4.12
	-25.0	-25.4	9.40	4.23	9.15	4.20	8.89	4.18	8.74	4.15	8.58	4.11	8.28	4.05
	-19.8	-20.0	9.64	4.38	9.38	4.26	9.10	4.13	8.96	4.05	8.81	3.99	8.55	3.91
	-18.8	-19.0	9.64	4.31	9.37	4.17	9.10	4.04	8.96	3.96	8.82	3.90	8.51	3.78
	-16.7	-17.0	9.64	4.15	9.37	4.00	9.10	3.85	8.96	3.79	8.81	3.72	8.53	3.69
	-13.7	-15.0	9.64	4.01	9.37	3.86	9.10	3.71	8.96	3.69	8.81	3.66	8.52	3.61
	-11.8	-13.0	9.64	3.83	9.37	3.68	9.11	3.62	8.96	3.58	8.81	3.56	8.51	3.49
	-9.8	-11.0	9.64	3.65	9.37	3.58	9.10	3.50	8.96	3.46	8.81	3.42	8.51	3.36
	-9.5	-10.0	9.64	3.57	9.38	3.50	9.10	3.43	8.96	3.38	8.81	3.35	8.51	3.27
	-8.5	-9.1	9.64	3.53	9.37	3.45	9.10	3.38	8.96	3.33	8.81	3.30	8.51	3.23
	-7.0	-7.6	9.64	3.45	9.37	3.35	9.10	3.28	8.96	3.24	8.81	3.20	8.51	3.13
	-5.0	-5.6	9.46	3.27	9.21	3.19	8.94	3.12	8.80	3.07	8.66	3.03	8.37	2.94
	-3.0	-3.7	9.75	3.21	9.48	3.14	9.20	3.05	9.06	3.02	8.91	2.97	8.60	2.88
	0.0	-0.7	10.48	3.21	10.18	3.12	9.87	3.05	9.71	3.01	9.55	2.96	9.21	2.86
	3.0	2.2	11.66	3.34	11.31	3.24	10.95	3.14	10.77	3.10	10.56	3.05	10.04	2.92
	5.0	4.1	12.62	3.44	12.23	3.35	11.81	3.17	11.45	3.04	11.28	2.96	10.96	2.84
	7.0	6.0	14.17	3.53	13.77	3.41	13.50	3.34	11.45	2.83	11.28	2.78	10.96	2.71
	9.0	7.9	14.49	3.46	14.21	3.37	13.50	3.17	11.45	2.68	11.28	2.63	11.41	2.82
	11.0	9.8	14.94	3.37	14.65	3.28	13.50	3.02	11.45	2.55	11.28	2.51	11.41	2.52
13.0	11.8	15.39	3.30	14.65	3.11	13.50	2.86	11.45	2.41	12.56	2.85	11.41	2.57	
15.0	13.7	15.84	3.22	14.65	2.95	13.50	2.72	13.13	2.85	12.56	2.53	11.41	2.43	
18.0	16.6	15.98	3.23	14.85	3.03	13.70	2.75	13.13	2.62	12.56	2.50	11.41	2.23	
21.0	19.5	15.98	2.70	14.85	2.51	13.70	2.28	13.13	2.39	12.56	2.26	11.41	2.09	
24.0	22.4	15.98	2.76	14.85	2.51	13.70	2.27	13.13	2.15	12.56	2.12	11.41	2.01	
27.0	25.3	15.98	2.41	14.85	2.22	13.70	1.98	13.13	1.95	12.56	1.92	11.41	1.87	
30.0	28.1	15.98	2.11	14.85	1.96	13.70	1.72	13.13	1.77	12.56	1.74	11.41	1.74	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.



Table 2-8.15: 10HP heating capacity

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
130%	-30.0	-30.5	22.19	7.53	21.76	7.80	21.34	8.06	21.12	8.19	20.91	8.37	20.48	8.09
	-25.0	-25.4	22.19	7.72	21.98	8.02	21.60	8.28	21.41	8.40	21.55	8.69	20.70	8.48
	-19.8	-20.0	23.26	8.29	22.90	8.50	22.55	8.77	22.37	8.89	22.19	9.02	21.84	9.27
	-18.8	-19.0	23.39	8.35	23.02	8.57	22.67	8.81	22.48	8.96	22.31	9.06	21.95	9.30
	-16.7	-17.0	23.63	8.47	23.26	8.70	22.89	8.92	22.71	9.02	22.52	9.15	22.15	9.39
	-13.7	-15.0	23.87	8.62	23.49	8.85	23.11	9.05	22.92	9.17	22.73	9.28	22.35	9.51
	-11.8	-13.0	24.09	8.69	23.70	8.90	23.31	9.11	23.12	9.23	22.92	9.33	22.53	9.55
	-9.8	-11.0	24.29	8.76	23.90	8.96	23.50	9.15	23.30	9.28	23.10	9.38	22.70	9.59
	-9.5	-10.0	24.39	8.75	23.99	8.95	23.59	9.15	23.39	9.24	23.19	9.36	22.79	9.56
	-8.5	-9.1	24.48	8.77	24.07	8.97	23.67	9.16	23.47	9.27	23.26	9.37	22.86	9.58
	-7.0	-7.6	24.61	8.81	24.20	9.01	23.79	9.21	23.59	9.30	23.38	9.40	22.94	9.53
	-5.0	-5.6	24.35	8.69	23.94	8.88	23.53	9.07	23.32	9.18	23.11	9.27	22.53	9.06
	-3.0	-3.7	25.21	8.86	24.79	9.06	24.36	9.24	24.15	9.33	23.94	9.45	23.19	8.92
	0.0	-0.7	27.37	9.38	26.91	9.58	26.45	9.79	26.17	9.77	25.76	9.63	24.91	8.93
	3.0	2.2	30.80	10.33	30.29	10.55	29.64	10.41	29.17	10.32	28.69	9.98	27.68	9.07
	5.0	4.1	33.63	11.11	33.07	11.33	32.14	10.79	31.60	10.68	31.06	10.20	29.91	9.21
	7.0	6.0	38.65	12.58	37.87	12.52	36.60	11.72	35.94	11.47	34.82	10.78	33.69	9.76
	9.0	7.9	39.91	12.83	38.79	12.23	37.47	11.41	36.32	10.91	35.78	10.41	34.12	9.37
	11.0	9.8	41.01	12.72	39.70	11.94	37.83	10.91	37.29	10.53	36.59	10.00	34.12	8.82
	13.0	11.8	41.95	12.48	40.59	11.62	38.81	10.60	38.08	10.06	37.53	9.65	34.12	8.26
15.0	13.7	42.87	12.14	40.92	11.10	39.58	10.16	39.19	9.74	37.53	9.08	34.12	7.73	
18.0	16.6	44.23	11.07	42.42	9.96	40.96	9.13	39.24	8.52	37.53	7.94	34.12	6.80	
21.0	19.5	45.10	10.61	43.81	9.61	40.96	8.50	39.24	7.89	37.53	7.27	34.12	6.23	
24.0	22.4	46.42	10.17	44.36	9.04	40.96	7.78	39.24	7.16	37.53	6.55	34.12	5.69	
27.0	25.3	47.77	9.54	44.36	8.35	40.96	7.07	39.24	6.45	37.53	5.97	34.12	5.22	
30.0	28.1	47.77	8.70	44.36	7.72	40.96	6.42	39.24	5.80	37.53	5.44	34.12	4.78	
120%	-30.0	-30.5	21.21	7.42	20.80	7.69	20.40	7.95	20.19	8.10	19.99	8.15	19.58	7.57
	-25.0	-25.4	21.48	7.70	21.44	8.07	21.12	8.35	20.97	8.50	20.78	8.58	19.78	8.14
	-19.8	-20.0	22.44	8.25	22.09	8.47	21.75	8.71	21.58	8.84	21.41	8.95	21.06	9.22
	-18.8	-19.0	22.56	8.29	22.21	8.53	21.86	8.78	21.68	8.89	21.51	9.02	21.16	9.25
	-16.7	-17.0	22.79	8.42	22.43	8.63	22.07	8.87	21.89	8.98	21.71	9.10	21.35	9.34
	-13.7	-15.0	23.00	8.58	22.63	8.78	22.26	9.03	22.08	9.13	21.89	9.25	21.53	9.48
	-11.8	-13.0	23.20	8.65	22.82	8.87	22.44	9.09	22.26	9.20	22.07	9.30	21.69	9.53
	-9.8	-11.0	23.38	8.72	23.00	8.93	22.62	9.14	22.43	9.24	22.23	9.35	21.80	9.44
	-9.5	-10.0	23.47	8.70	23.09	8.91	22.70	9.12	22.50	9.23	22.31	9.31	21.80	9.22
	-8.5	-9.1	23.55	8.74	23.16	8.93	22.77	9.15	22.57	9.24	22.38	9.35	21.80	9.06
	-7.0	-7.6	23.68	8.78	23.28	8.97	22.89	9.16	22.69	9.27	22.49	9.38	21.80	8.79
	-5.0	-5.6	23.41	8.69	23.02	8.87	22.62	9.04	22.42	9.15	22.12	8.96	21.42	8.33
	-3.0	-3.7	24.24	8.85	23.83	9.03	23.42	9.22	23.13	9.05	22.78	8.82	22.04	8.15
	0.0	-0.7	26.32	9.38	25.87	9.58	25.26	9.45	24.88	9.21	24.48	8.94	23.66	8.14
	3.0	2.2	29.63	10.34	29.03	10.26	28.15	9.92	27.70	9.49	27.24	9.07	26.26	8.24
	5.0	4.1	32.37	11.13	31.50	10.66	30.50	10.13	29.99	9.72	29.46	9.26	28.35	8.43
	7.0	6.0	37.08	12.28	35.91	11.60	34.68	10.87	33.63	10.23	33.13	9.76	31.50	8.83
	9.0	7.9	37.99	12.05	36.77	11.29	35.06	10.34	34.55	9.87	33.93	9.45	31.50	8.35
	11.0	9.8	38.89	11.76	37.62	10.98	35.99	9.96	35.34	9.50	34.65	9.07	31.50	7.80
	13.0	11.8	39.77	11.43	37.98	10.47	36.77	9.57	36.24	9.19	34.65	8.51	31.50	7.27
15.0	13.7	40.63	11.08	38.93	10.06	37.79	9.23	36.24	8.66	34.65	7.96	31.50	6.71	
18.0	16.6	41.46	9.74	40.24	9.04	37.79	8.09	36.24	7.54	34.65	7.02	31.50	6.15	
21.0	19.5	42.70	9.42	40.96	8.50	37.79	7.37	36.24	6.87	34.65	6.41	31.50	5.68	
24.0	22.4	44.11	9.01	40.96	7.80	37.79	6.67	36.24	6.25	34.65	5.84	31.50	5.18	
27.0	25.3	44.11	8.34	40.96	7.12	37.79	6.05	36.24	5.68	34.65	5.36	31.50	4.70	
30.0	28.1	44.11	7.71	40.96	6.50	37.79	5.48	36.24	5.16	34.65	4.92	31.50	4.27	

Abbreviations:  
 CR: Combination ratio  
 TC: Total capacity (kW)  
 PI: Power input (compressor + outdoor fan motor) (kW)  
 Notes:  
 Shaded cells indicate rating condition.

Table continued on next page ...

# MDV8 ECO VRF 50Hz



Table 2-8.15: 10HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
110%	-30.0	-30.5	20.04	7.24	19.65	7.51	19.42	7.85	19.07	7.76	18.88	7.44	18.50	7.07
	-25.0	-25.4	20.83	7.72	20.52	7.99	20.22	8.28	19.97	8.29	19.62	8.11	18.72	7.80
	-19.8	-20.0	21.44	8.16	21.11	8.38	20.78	8.62	20.61	8.73	20.45	8.88	20.12	9.12
	-18.8	-19.0	21.54	8.22	21.21	8.44	20.87	8.67	20.70	8.80	20.54	8.93	20.20	9.16
	-16.7	-17.0	21.74	8.33	21.40	8.57	21.05	8.78	20.88	8.92	20.71	9.02	20.36	9.24
	-13.7	-15.0	21.93	8.49	21.58	8.71	21.23	8.93	21.05	9.05	20.87	9.16	20.49	9.33
	-11.8	-13.0	22.11	8.57	21.75	8.79	21.39	8.99	21.21	9.09	21.03	9.21	20.49	9.08
	-9.8	-11.0	22.28	8.64	21.91	8.86	21.54	9.04	21.36	9.15	21.18	9.27	20.49	8.81
	-9.5	-10.0	22.36	8.62	21.99	8.83	21.62	9.03	21.43	9.13	21.18	9.04	20.49	8.50
	-8.5	-9.1	22.43	8.66	22.06	8.85	21.68	9.06	21.49	9.15	21.18	8.90	20.49	8.25
	-7.0	-7.6	22.54	8.72	22.17	8.90	21.78	9.11	21.51	9.23	21.18	8.63	20.49	7.97
	-5.0	-5.6	22.28	8.59	21.90	8.79	21.44	8.71	21.12	8.52	20.80	8.20	20.13	7.51
	-3.0	-3.7	23.07	8.77	22.67	8.97	22.08	8.58	21.75	8.35	21.41	8.02	20.71	7.30
	0.0	-0.7	25.04	9.34	24.45	9.21	23.74	8.73	23.38	8.39	23.00	8.02	22.22	7.34
	3.0	2.2	28.08	9.96	27.28	9.66	26.44	8.90	26.01	8.51	25.57	8.14	24.64	7.51
	5.0	4.1	30.48	10.32	29.57	9.87	28.63	9.07	28.14	8.68	27.63	8.29	26.57	7.64
	7.0	6.0	34.78	11.26	33.67	10.58	32.10	9.54	31.63	9.18	31.06	8.81	28.87	7.78
	9.0	7.9	35.63	10.97	34.47	10.18	32.98	9.23	32.38	8.89	31.76	8.50	28.87	7.27
	11.0	9.8	36.46	10.64	34.82	9.68	33.72	8.94	33.20	8.60	31.76	7.94	28.87	6.75
	13.0	11.8	37.28	10.28	35.72	9.32	34.65	8.63	33.20	8.05	31.76	7.43	28.87	6.38
	15.0	13.7	37.62	9.71	36.46	8.96	34.65	8.06	33.20	7.49	31.76	6.84	28.87	6.04
18.0	16.6	38.76	8.67	37.53	8.03	34.65	7.07	33.20	6.61	31.76	6.27	28.87	5.57	
21.0	19.5	40.34	8.35	37.53	7.37	34.65	6.45	33.20	6.08	31.76	5.76	28.87	5.11	
24.0	22.4	40.43	7.69	37.53	6.66	34.65	5.88	33.20	5.57	31.76	5.25	28.87	4.69	
27.0	25.3	40.43	6.98	37.53	6.05	34.65	5.37	33.20	5.06	31.76	4.78	28.87	4.24	
30.0	28.1	40.43	6.33	37.53	5.50	34.65	4.91	33.20	4.59	31.76	4.35	28.87	3.83	
100%	-30.0	-30.5	19.92	7.56	19.54	7.76	19.15	7.67	18.96	7.34	18.77	7.15	18.39	6.67
	-25.0	-25.4	20.71	8.04	20.41	8.28	19.91	8.29	19.55	8.10	18.99	7.89	18.39	7.62
	-19.8	-20.0	21.31	8.45	20.98	8.70	20.66	8.94	20.49	9.07	20.33	9.20	20.00	9.47
	-18.8	-19.0	21.41	8.52	21.08	8.76	20.75	9.00	20.58	9.13	20.42	9.25	20.04	9.41
	-16.7	-17.0	21.61	8.66	21.27	8.89	20.93	9.11	20.76	9.24	20.59	9.36	20.04	9.18
	-13.7	-15.0	21.80	8.82	21.45	9.04	21.10	9.27	20.93	9.39	20.74	9.51	20.04	9.00
	-11.8	-13.0	21.98	8.90	21.62	9.13	21.26	9.34	21.08	9.44	20.74	9.26	20.04	8.71
	-9.8	-11.0	22.14	8.99	21.78	9.22	21.40	9.39	21.08	9.21	20.74	9.00	20.04	8.43
	-9.5	-10.0	22.22	8.98	21.85	9.18	21.40	9.16	21.08	8.89	20.74	8.68	20.04	8.10
	-8.5	-9.1	22.29	9.04	21.92	9.23	21.40	9.01	21.08	8.71	20.74	8.43	20.04	7.83
	-7.0	-7.6	22.40	9.06	22.03	9.28	21.40	8.76	21.08	8.43	20.74	8.14	20.04	7.51
	-5.0	-5.6	22.14	8.97	21.65	8.87	21.03	8.32	20.71	7.98	20.38	7.69	19.70	7.09
	-3.0	-3.7	22.91	9.14	22.29	8.75	21.64	8.17	21.31	7.79	20.96	7.48	20.25	6.91
	0.0	-0.7	24.65	9.33	23.96	8.80	23.24	8.13	22.87	7.81	22.48	7.50	21.69	6.91
	3.0	2.2	27.47	9.66	26.66	8.96	25.81	8.23	25.38	7.93	24.92	7.66	23.97	7.07
	5.0	4.1	29.76	9.87	28.84	9.11	27.88	8.41	27.39	8.10	26.49	7.70	25.58	7.10
	7.0	6.0	33.83	10.55	32.41	9.64	31.50	8.97	30.21	8.46	28.87	7.89	26.25	6.80
	9.0	7.9	34.22	10.04	33.16	9.29	31.50	8.47	30.21	7.93	28.87	7.37	26.25	6.38
	11.0	9.8	35.13	9.70	34.12	9.04	31.50	7.94	30.21	7.41	28.87	6.84	26.25	6.04
	13.0	11.8	35.90	9.31	34.12	8.50	31.50	7.41	30.21	6.84	28.87	6.41	26.25	5.73
	15.0	13.7	36.76	8.99	34.12	7.94	31.50	6.82	30.21	6.41	28.87	6.08	26.25	5.43
18.0	16.6	36.76	7.80	34.12	6.96	31.50	6.21	30.21	5.92	28.87	5.59	26.25	5.00	
21.0	19.5	36.76	7.12	34.12	6.33	31.50	5.73	30.21	5.43	28.87	5.16	26.25	4.59	
24.0	22.4	36.76	6.45	34.12	5.78	31.50	5.24	30.21	4.96	28.87	4.70	26.25	4.18	
27.0	25.3	36.76	5.84	34.12	5.27	31.50	4.75	30.21	4.49	28.87	4.28	26.25	3.77	
30.0	28.1	36.76	5.29	34.12	4.80	31.50	4.31	30.21	4.06	28.87	3.89	26.25	3.40	

**Abbreviations:**

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

**Notes:**

Shaded cells indicate rating condition.

Table continued on next page ...

Table2-8.15:10HP heating capacity(continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
90%	-30.0	-30.5	18.54	7.33	17.77	7.10	17.24	6.58	17.06	6.34	16.89	6.16	16.55	6.16
	-25.0	-25.4	19.09	7.75	18.67	7.78	18.09	7.54	17.78	7.40	17.46	7.27	16.69	6.94
	-19.8	-20.0	19.57	8.16	19.26	8.38	18.96	8.63	18.81	8.77	18.65	8.88	18.04	8.38
	-18.8	-19.0	19.65	8.22	19.34	8.46	19.03	8.69	18.88	8.81	18.66	8.79	18.04	8.23
	-16.7	-17.0	19.81	8.34	19.50	8.57	19.18	8.79	18.97	8.76	18.66	8.57	18.04	8.02
	-13.7	-15.0	19.96	8.51	19.64	8.73	19.26	8.81	18.97	8.65	18.66	8.39	18.04	7.83
	-11.8	-13.0	20.11	8.60	19.78	8.81	19.26	8.54	18.97	8.40	18.66	8.14	18.04	7.55
	-9.8	-11.0	20.24	8.66	19.84	8.67	19.26	8.31	18.97	8.14	18.66	7.86	18.04	7.23
	-9.5	-10.0	20.31	8.68	19.84	8.45	19.26	8.01	18.97	7.84	18.66	7.55	18.04	6.93
	-8.5	-9.1	20.36	8.71	19.84	8.29	19.26	7.79	18.97	7.57	18.66	7.29	18.04	6.80
	-7.0	-7.6	20.39	8.55	19.84	8.05	19.26	7.53	18.97	7.30	18.66	7.00	18.04	6.58
	-5.0	-5.6	20.02	8.15	19.48	7.61	18.92	7.10	18.64	6.85	18.34	6.62	17.73	6.19
	-3.0	-3.7	20.62	8.03	20.06	7.45	19.48	6.90	19.18	6.69	18.87	6.43	18.23	6.01
	0.0	-0.7	22.18	8.05	21.56	7.51	20.91	6.95	20.58	6.75	20.23	6.43	19.52	6.00
	3.0	2.2	24.72	8.20	23.99	7.61	23.23	7.14	22.84	6.90	22.43	6.64	21.58	6.13
	5.0	4.1	26.78	8.34	25.96	7.80	25.09	7.25	24.64	7.01	23.84	6.62	23.02	6.13
	7.0	6.0	30.45	8.93	29.17	8.25	28.35	7.69	27.17	7.21	25.98	6.71	23.63	5.97
	9.0	7.9	30.79	8.55	29.84	7.93	28.35	7.16	27.17	6.71	25.98	6.30	23.63	5.63
	11.0	9.8	31.61	8.27	30.72	7.62	28.35	6.66	27.17	6.30	25.98	6.00	23.63	5.36
	13.0	11.8	32.31	7.87	30.72	7.07	28.35	6.29	27.17	5.98	25.98	5.68	23.63	5.11
15.0	13.7	33.08	7.49	30.72	6.59	28.35	5.98	27.17	5.68	25.98	5.40	23.63	4.86	
18.0	16.6	33.08	6.66	30.72	6.08	28.35	5.51	27.17	5.24	25.98	4.96	23.63	4.49	
21.0	19.5	33.08	6.13	30.72	5.57	28.35	5.06	27.17	4.80	25.98	4.55	23.63	4.08	
24.0	22.4	33.08	5.59	30.72	5.07	28.35	4.61	27.17	4.39	25.98	4.18	23.63	3.72	
27.0	25.3	33.08	5.07	30.72	4.63	28.35	4.18	27.17	3.96	25.98	3.75	23.63	3.28	
30.0	28.1	33.08	4.60	30.72	4.23	28.35	3.80	27.17	3.56	25.98	3.35	23.63	2.90	
80%	-30.0	-30.5	16.62	6.59	15.63	5.86	15.32	5.59	15.17	5.59	15.02	5.61	14.71	5.80
	-25.0	-25.4	17.23	7.23	16.72	6.97	16.21	6.75	15.96	6.64	15.70	6.54	14.92	6.28
	-19.8	-20.0	17.75	7.87	17.47	8.11	17.12	8.14	16.86	7.93	16.59	7.70	16.03	7.21
	-18.8	-19.0	17.82	7.93	17.53	8.15	17.12	8.01	16.86	7.81	16.59	7.57	16.03	7.08
	-16.7	-17.0	17.94	8.04	17.63	8.22	17.12	7.80	16.86	7.57	16.59	7.33	16.03	6.82
	-13.7	-15.0	18.06	8.20	17.63	8.09	17.12	7.64	16.86	7.41	16.59	7.15	16.03	6.65
	-11.8	-13.0	18.12	8.12	17.63	7.86	17.12	7.40	16.86	7.15	16.59	6.87	16.03	6.41
	-9.8	-11.0	18.12	7.91	17.63	7.62	17.12	7.14	16.86	6.87	16.59	6.60	16.03	6.14
	-9.5	-10.0	18.12	7.65	17.63	7.35	17.12	6.83	16.86	6.58	16.59	6.34	16.03	6.01
	-8.5	-9.1	18.12	7.48	17.63	7.09	17.12	6.59	16.86	6.41	16.59	6.24	16.03	5.88
	-7.0	-7.6	18.12	7.25	17.63	6.82	17.12	6.40	16.86	6.23	16.59	6.04	16.03	5.70
	-5.0	-5.6	17.80	6.89	17.32	6.44	16.82	6.01	16.56	5.87	16.30	5.69	15.76	5.34
	-3.0	-3.7	18.33	6.71	17.83	6.26	17.31	5.87	17.04	5.69	16.77	5.54	16.20	5.20
	0.0	-0.7	19.72	6.74	19.16	6.31	18.59	5.86	18.29	5.67	17.99	5.50	17.35	5.16
	3.0	2.2	21.98	6.90	21.33	6.49	20.65	6.07	20.30	5.85	19.93	5.65	19.18	5.30
	5.0	4.1	23.81	7.08	23.07	6.58	22.31	6.10	21.90	5.89	21.19	5.64	20.47	5.38
	7.0	6.0	27.06	7.58	25.93	6.90	25.20	6.44	24.15	6.14	23.09	5.82	21.01	5.22
	9.0	7.9	27.37	7.17	26.53	6.56	25.21	6.13	24.15	5.78	23.09	5.52	21.01	4.94
	11.0	9.8	28.10	6.84	27.30	6.39	25.21	5.82	24.15	5.53	23.09	5.24	21.01	4.69
	13.0	11.8	28.72	6.45	27.30	6.04	25.21	5.52	24.15	5.25	23.09	4.95	21.01	4.45
15.0	13.7	29.40	6.25	27.30	5.73	25.21	5.24	24.15	4.99	23.09	4.75	21.01	4.22	
18.0	16.6	29.40	5.78	27.30	5.27	25.21	4.83	24.15	4.59	23.09	4.39	21.01	3.88	
21.0	19.5	29.40	5.31	27.30	4.83	25.21	4.43	24.15	4.22	23.09	4.02	21.01	3.57	
24.0	22.4	29.40	4.83	27.30	4.45	25.21	4.02	24.15	3.83	23.09	3.65	21.01	3.30	
27.0	25.3	29.40	4.39	27.30	3.98	25.21	3.63	24.15	3.44	23.09	3.22	21.01	2.82	
30.0	28.1	29.40	4.00	27.30	3.57	25.21	3.27	24.15	3.10	23.09	2.83	21.01	2.41	

Abbreviations:  
 CR: Combination ratio  
 TC: Total capacity (kW)  
 PI: Power input (compressor + outdoor fan motor) (kW)  
 Notes:  
 Shaded cells indicate rating condition.

Table continued on next page ...

# MDV8 ECO VRF 50Hz



Table 2-8.15: 10HP heating capacity (continued)

MDV8 ECO Series Engineering Data Book

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
70%	-30.0	-30.5	14.37	5.31	13.81	5.22	13.41	5.02	13.27	5.09	13.14	5.29	12.87	5.53
	-25.0	-25.4	15.20	6.40	14.78	6.23	14.31	5.94	14.11	5.89	13.89	5.90	13.38	5.81
	-19.8	-20.0	15.85	7.60	15.43	7.25	14.98	6.90	14.75	6.69	14.52	6.49	14.03	6.15
	-18.8	-19.0	15.86	7.50	15.43	7.14	14.98	6.76	14.75	6.58	14.52	6.40	14.03	6.09
	-16.7	-17.0	15.86	7.34	15.43	6.95	14.98	6.57	14.75	6.37	14.52	6.18	14.03	5.90
	-13.7	-15.0	15.86	7.20	15.43	6.77	14.98	6.38	14.75	6.16	14.52	6.01	14.03	5.72
	-11.8	-13.0	15.86	6.99	15.43	6.55	14.98	6.13	14.75	5.93	14.52	5.78	14.03	5.49
	-9.8	-11.0	15.86	6.77	15.43	6.29	14.98	5.89	14.75	5.70	14.52	5.55	14.03	5.27
	-9.5	-10.0	15.86	6.48	15.43	6.00	14.98	5.70	14.75	5.55	14.52	5.40	14.03	5.11
	-8.5	-9.1	15.86	6.24	15.43	5.89	14.98	5.59	14.75	5.44	14.52	5.32	14.03	5.00
	-7.0	-7.6	15.86	5.98	15.43	5.69	14.98	5.42	14.75	5.27	14.52	5.12	14.03	4.83
	-5.0	-5.6	15.57	5.64	15.15	5.36	14.72	5.10	14.49	4.95	14.27	4.81	13.79	4.60
	-3.0	-3.7	16.04	5.50	15.60	5.22	15.15	4.94	14.91	4.80	14.68	4.68	14.17	4.50
	0.0	-0.7	17.25	5.54	16.77	5.25	16.27	4.88	16.01	4.79	15.74	4.70	15.18	4.48
	3.0	2.2	19.23	5.76	18.66	5.41	18.07	5.07	17.76	4.94	17.45	4.82	16.78	4.62
	5.0	4.1	20.83	5.84	20.19	5.46	19.52	5.15	19.17	5.05	18.54	4.88	17.91	4.68
	7.0	6.0	23.68	6.17	22.69	5.77	22.05	5.56	21.13	5.35	20.22	5.02	18.37	4.49
	9.0	7.9	23.95	5.85	23.21	5.59	22.05	5.25	21.13	4.96	20.22	4.75	18.37	4.28
	11.0	9.8	24.59	5.72	23.90	5.51	22.05	4.96	21.13	4.74	20.22	4.49	18.37	4.02
	13.0	11.8	25.13	5.55	23.90	5.22	22.05	4.75	21.13	4.49	20.22	4.28	18.37	3.83
15.0	13.7	25.72	5.37	23.90	4.95	22.05	4.49	21.13	4.28	20.22	4.04	18.37	3.61	
18.0	16.6	25.72	4.95	23.90	4.54	22.05	4.14	21.13	3.96	20.22	3.75	18.37	3.31	
21.0	19.5	25.72	4.53	23.90	4.18	22.05	3.83	21.13	3.60	20.22	3.42	18.37	3.03	
24.0	22.4	25.72	4.13	23.90	3.77	22.05	3.47	21.13	3.30	20.22	3.10	18.37	2.73	
27.0	25.3	25.72	3.75	23.90	3.42	22.05	3.03	21.13	2.85	20.22	2.69	18.37	2.49	
30.0	28.1	25.72	3.40	23.90	3.09	22.05	2.65	21.13	2.46	20.22	2.33	18.37	2.27	
60%	-30.0	-30.5	12.58	4.80	12.22	4.75	11.86	4.96	11.53	4.91	11.37	4.92	11.03	5.08
	-25.0	-25.4	13.14	5.51	12.77	5.35	12.40	5.32	12.21	5.29	12.00	5.24	11.59	5.22
	-19.8	-20.0	13.59	6.27	13.22	5.96	12.84	5.67	12.65	5.57	12.44	5.48	12.02	5.29
	-18.8	-19.0	13.59	6.16	13.22	5.85	12.84	5.59	12.65	5.51	12.44	5.41	12.02	5.21
	-16.7	-17.0	13.59	5.96	13.22	5.67	12.84	5.43	12.65	5.33	12.44	5.22	12.02	5.00
	-13.7	-15.0	13.59	5.79	13.22	5.50	12.84	5.29	12.65	5.18	12.44	5.07	12.02	4.81
	-11.8	-13.0	13.59	5.56	13.22	5.30	12.84	5.07	12.65	4.97	12.44	4.85	12.02	4.60
	-9.8	-11.0	13.59	5.34	13.22	5.09	12.84	4.87	12.65	4.75	12.44	4.63	12.02	4.44
	-9.5	-10.0	13.59	5.18	13.22	4.97	12.84	4.73	12.65	4.60	12.44	4.49	12.02	4.34
	-8.5	-9.1	13.59	5.09	13.22	4.86	12.84	4.63	12.65	4.51	12.44	4.41	12.02	4.30
	-7.0	-7.6	13.59	4.93	13.22	4.70	12.84	4.48	12.65	4.38	12.44	4.31	12.02	4.18
	-5.0	-5.6	13.35	4.62	12.99	4.42	12.62	4.22	12.42	4.17	12.23	4.08	11.82	3.95
	-3.0	-3.7	13.75	4.50	13.37	4.28	12.98	4.16	12.78	4.08	12.58	4.02	12.15	3.89
	0.0	-0.7	14.79	4.50	14.37	4.32	13.94	4.16	13.72	4.08	13.49	4.02	13.01	3.87
	3.0	2.2	16.48	4.67	16.00	4.45	15.49	4.29	15.23	4.22	14.95	4.13	14.38	3.99
	5.0	4.1	17.86	4.74	17.30	4.58	16.73	4.41	16.43	4.33	15.89	4.20	15.35	4.06
	7.0	6.0	20.30	5.13	19.45	4.85	18.90	4.65	18.12	4.43	17.33	4.20	15.74	3.78
	9.0	7.9	20.53	4.89	19.89	4.67	18.90	4.43	18.12	4.20	17.33	4.01	15.74	3.60
	11.0	9.8	21.08	4.76	20.48	4.60	18.90	4.18	18.12	3.99	17.33	3.79	15.74	3.42
	13.0	11.8	21.54	4.65	20.48	4.34	18.90	3.95	18.12	3.78	17.33	3.60	15.74	3.25
15.0	13.7	22.05	4.51	20.48	4.11	18.90	3.75	18.12	3.57	17.33	3.42	15.74	3.08	
18.0	16.6	22.05	4.20	20.48	3.78	18.90	3.46	18.12	3.28	17.33	3.23	15.74	2.89	
21.0	19.5	22.05	3.83	20.48	3.49	18.90	3.15	18.12	2.99	17.33	2.83	15.74	2.55	
24.0	22.4	22.05	3.48	20.48	3.16	18.90	2.83	18.12	2.70	17.33	2.53	15.74	2.42	
27.0	25.3	22.05	3.03	20.48	2.74	18.90	2.46	18.12	2.45	17.33	2.30	15.74	2.01	
30.0	28.1	22.05	2.64	20.48	2.37	18.90	2.14	18.12	2.22	17.33	2.10	15.74	1.67	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

Table2-8.15:10HP heating capacity(continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
50%	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
	-30.0	-30.5	10.70	4.47	10.42	4.53	10.12	4.58	9.96	4.62	9.80	4.68	9.49	4.76
	-25.0	-25.4	11.04	4.75	10.74	4.72	10.43	4.67	10.27	4.65	10.11	4.65	9.77	4.60
	-19.8	-20.0	11.33	5.01	11.02	4.88	10.70	4.74	10.54	4.67	10.37	4.59	10.02	4.43
	-18.8	-19.0	11.33	4.95	11.02	4.81	10.70	4.65	10.54	4.58	10.37	4.50	10.02	4.34
	-16.7	-17.0	11.33	4.79	11.02	4.64	10.70	4.48	10.54	4.38	10.37	4.30	10.02	4.14
	-13.7	-15.0	11.33	4.66	11.02	4.48	10.70	4.32	10.54	4.22	10.37	4.14	10.02	4.07
	-11.8	-13.0	11.33	4.47	11.02	4.30	10.70	4.11	10.54	4.04	10.37	3.99	10.02	3.92
	-9.8	-11.0	11.33	4.28	11.02	4.09	10.70	3.96	10.54	3.93	10.37	3.88	10.02	3.79
	-9.5	-10.0	11.33	4.16	11.02	3.99	10.70	3.89	10.54	3.85	10.37	3.79	10.02	3.69
	-8.5	-9.1	11.33	4.07	11.02	3.93	10.70	3.84	10.54	3.78	10.37	3.74	10.02	3.64
	-7.0	-7.6	11.33	3.94	11.02	3.84	10.70	3.74	10.54	3.68	10.37	3.63	10.02	3.55
	-5.0	-5.6	11.12	3.74	10.82	3.64	10.51	3.55	10.35	3.49	10.19	3.46	9.85	3.35
	-3.0	-3.7	11.45	3.68	11.14	3.58	10.82	3.48	10.65	3.44	10.48	3.38	10.13	3.29
	0.0	-0.7	12.32	3.68	11.98	3.56	11.62	3.46	11.43	3.41	11.24	3.35	10.84	3.25
	3.0	2.2	13.73	3.79	13.33	3.70	12.90	3.58	12.69	3.52	12.46	3.47	11.99	3.37
	5.0	4.1	14.88	3.92	14.42	3.81	13.94	3.70	13.69	3.63	13.25	3.51	12.79	3.26
	7.0	6.0	16.91	4.15	16.20	3.94	15.74	3.78	15.10	3.63	14.45	3.46	13.13	3.15
	9.0	7.9	17.11	3.98	16.58	3.84	15.74	3.61	15.10	3.45	14.45	3.28	13.13	2.96
	11.0	9.8	17.56	3.88	17.06	3.74	15.74	3.44	15.10	3.28	14.45	3.13	13.13	2.82
13.0	11.8	17.95	3.77	17.06	3.56	15.74	3.26	15.10	3.11	14.45	2.96	13.13	2.74	
15.0	13.7	18.37	3.65	17.06	3.34	15.74	3.09	15.10	2.96	14.45	2.80	13.13	2.58	
18.0	16.6	18.37	3.34	17.06	3.17	15.74	2.89	15.10	2.78	14.45	2.66	13.13	2.38	
21.0	19.5	18.37	3.03	17.06	2.79	15.74	2.54	15.10	2.51	14.45	2.41	13.13	2.21	
24.0	22.4	18.37	2.74	17.06	2.48	15.74	2.42	15.10	2.30	14.45	2.18	13.13	2.11	
27.0	25.3	18.37	2.51	17.06	2.26	15.74	2.04	15.10	2.01	14.45	1.97	13.13	1.92	
30.0	28.1	18.37	2.31	17.06	2.06	15.74	1.71	15.10	1.75	14.45	1.78	13.13	1.74	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table 2-8.16: 12HP heating capacity

CR	Outdoor air temp.		Indoor air temp. °C DB												
			16.0		18.0		20.0		21.0		22.0		24.0		
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	
		°C DB	°C WB	kW		kW		kW		kW		kW		kW	
130%		-30.0	-30.5	26.42	9.25	25.91	9.49	25.40	9.71	25.15	9.86	24.89	9.74	24.38	9.49
		-25.0	-25.4	26.42	9.37	25.91	9.58	25.40	9.78	25.15	9.90	24.89	9.84	24.38	9.67
		-19.8	-20.0	26.42	9.49	25.91	9.67	25.40	9.85	25.15	9.95	24.89	9.94	24.38	9.85
		-18.8	-19.0	26.42	9.49	25.91	9.65	25.40	9.85	25.15	9.96	25.11	10.13	24.38	9.87
		-16.7	-17.0	26.42	9.49	26.16	9.76	25.71	9.97	25.49	10.06	25.64	10.35	24.67	10.05
		-13.7	-15.0	26.77	9.67	26.73	10.03	26.34	10.26	26.14	10.37	25.94	10.49	25.38	10.48
		-11.8	-13.0	27.45	9.86	27.04	10.09	26.63	10.32	26.42	10.41	26.22	10.54	25.73	10.67
		-9.8	-11.0	27.76	9.93	27.34	10.15	26.91	10.36	26.70	10.49	26.48	10.59	26.05	10.81
		-9.5	-10.0	27.90	9.90	27.47	10.12	27.04	10.35	26.82	10.45	26.61	10.56	26.17	10.75
		-8.5	-9.1	28.03	9.96	27.59	10.16	27.16	10.38	26.94	10.48	26.72	10.57	26.28	10.80
		-7.0	-7.6	28.23	9.99	27.78	10.20	27.34	10.40	27.12	10.51	26.89	10.60	26.45	10.82
		-5.0	-5.6	28.00	9.87	27.55	10.04	27.10	10.27	26.87	10.36	26.65	10.46	26.20	10.66
		-3.0	-3.7	29.00	10.02	28.53	10.22	28.07	10.44	27.83	10.54	27.60	10.64	27.13	10.84
		0.0	-0.7	31.44	10.58	30.94	10.79	30.43	11.02	30.18	11.12	29.92	11.22	29.41	11.47
		3.0	2.2	35.27	11.58	34.71	11.80	34.15	12.06	33.87	12.18	33.58	12.30	32.82	12.15
		5.0	4.1	38.39	12.40	37.78	12.65	37.18	12.93	36.88	13.05	36.58	13.17	35.50	12.59
		7.0	6.0	43.45	13.81	42.61	14.02	42.12	14.43	41.75	14.54	41.33	14.55	40.10	13.59
		9.0	7.9	44.84	14.03	43.97	14.27	43.48	14.65	43.09	14.79	42.25	14.28	40.10	12.95
		11.0	9.8	46.23	14.29	45.34	14.50	44.84	14.90	44.00	14.48	43.56	14.07	40.10	12.30
		13.0	11.8	47.62	14.51	46.70	14.76	45.79	14.58	45.33	14.25	44.69	13.77	40.10	11.68
		15.0	13.7	49.01	14.73	48.43	15.12	47.12	14.34	46.65	14.00	44.69	13.11	40.10	11.03
		18.0	16.6	51.09	15.08	50.11	14.73	47.12	13.12	46.65	12.60	44.69	11.71	40.10	9.94
		21.0	19.5	53.18	15.23	52.16	14.62	47.12	12.34	46.65	11.81	44.69	10.95	40.10	9.27
	24.0	22.4	55.26	15.07	52.82	14.02	48.76	12.02	46.72	11.04	44.69	10.24	40.10	8.58	
	27.0	25.3	57.35	14.87	52.82	13.25	48.76	11.28	46.72	10.35	44.69	9.55	40.10	7.86	
	30.0	28.1	57.35	14.14	52.82	12.52	48.76	10.59	46.72	9.70	44.69	8.90	40.75	7.31	
120%		-30.0	-30.5	25.25	9.04	24.77	9.30	24.28	9.58	24.04	9.41	23.80	9.30	23.31	9.32
		-25.0	-25.4	25.25	9.16	24.77	9.39	24.28	9.62	24.04	9.54	23.80	9.47	23.31	9.40
		-19.8	-20.0	25.25	9.28	24.77	9.48	24.48	9.74	24.04	9.67	23.80	9.64	23.31	9.49
		-18.8	-19.0	25.25	9.30	24.98	9.57	24.56	9.79	24.31	9.81	24.01	9.74	23.31	9.52
		-16.7	-17.0	25.57	9.42	25.52	9.77	25.14	10.00	24.96	10.13	24.65	10.07	23.60	9.70
		-13.7	-15.0	26.20	9.70	25.82	9.94	25.43	10.16	25.24	10.29	24.97	10.30	24.30	10.13
		-11.8	-13.0	26.50	9.81	26.10	10.02	25.70	10.23	25.50	10.36	25.30	10.45	24.64	10.29
		-9.8	-11.0	26.78	9.87	26.36	10.06	25.95	10.30	25.75	10.40	25.54	10.52	24.96	10.44
		-9.5	-10.0	26.91	9.85	26.49	10.07	26.07	10.27	25.86	10.37	25.65	10.49	25.11	10.49
		-8.5	-9.1	27.02	9.88	26.60	10.09	26.17	10.29	25.96	10.41	25.75	10.52	25.24	10.58
		-7.0	-7.6	27.20	9.92	26.77	10.13	26.34	10.31	26.12	10.45	25.91	10.54	25.45	10.73
		-5.0	-5.6	26.96	9.80	26.53	10.00	26.09	10.21	25.88	10.30	25.66	10.39	25.22	10.62
		-3.0	-3.7	27.93	9.99	27.48	10.18	27.02	10.37	26.80	10.49	26.57	10.61	26.11	10.81
		0.0	-0.7	30.29	10.57	29.80	10.75	29.31	10.97	29.06	11.09	28.81	11.19	28.17	11.07
		3.0	2.2	33.99	11.55	33.45	11.80	32.91	12.05	32.63	12.16	32.26	12.09	31.27	11.68
		5.0	4.1	37.02	12.40	36.44	12.66	35.85	12.93	35.51	12.94	34.91	12.52	33.75	12.05
		7.0	6.0	41.92	13.84	41.20	14.12	40.47	14.37	39.94	13.97	39.14	13.40	37.50	12.75
		9.0	7.9	43.27	14.08	42.53	14.37	41.63	14.20	40.80	13.68	40.39	13.18	37.50	12.12
		11.0	9.8	44.63	14.33	43.86	14.63	42.49	13.86	42.07	13.43	40.39	12.53	37.50	11.51
		13.0	11.8	45.99	14.61	45.04	14.40	43.77	13.60	42.07	12.81	40.39	11.90	37.50	10.91
		15.0	13.7	47.35	14.86	45.95	14.05	43.77	12.96	42.07	12.16	40.39	11.27	37.50	10.29
		18.0	16.6	48.85	14.33	47.91	13.39	43.77	11.58	42.07	10.78	40.39	10.12	37.50	9.00
		21.0	19.5	50.84	14.13	47.91	12.62	43.77	10.83	42.07	10.11	40.39	9.48	37.50	8.24
	24.0	22.4	52.51	13.82	48.76	12.10	45.00	10.42	42.07	9.41	40.39	8.81	37.50	7.56	
	27.0	25.3	52.51	13.10	48.76	11.33	45.00	9.73	42.07	8.74	40.39	8.10	37.50	6.85	
	30.0	28.1	52.51	12.41	48.76	10.61	45.00	9.08	43.32	8.35	41.44	7.65	37.50	6.21	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

Table 2-8.16:12HP heating capacity(continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
110%	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
	-30.0	-30.5	23.85	8.84	23.40	9.07	22.94	9.02	22.71	9.04	22.48	8.95	22.02	8.83
	-25.0	-25.4	23.85	8.94	23.40	9.15	22.94	9.15	22.71	9.14	22.48	9.07	22.02	8.93
	-19.8	-20.0	24.09	9.14	23.70	9.35	23.21	9.40	22.92	9.33	22.48	9.19	22.02	9.03
	-18.8	-19.0	24.17	9.17	24.14	9.54	23.67	9.61	23.02	9.40	22.73	9.32	22.02	9.08
	-16.7	-17.0	24.79	9.41	24.43	9.63	24.07	9.86	23.65	9.66	23.31	9.57	22.34	9.25
	-13.7	-15.0	25.07	9.61	24.70	9.81	24.32	10.04	24.03	10.00	23.66	9.83	23.01	9.62
	-11.8	-13.0	25.33	9.67	24.94	9.89	24.56	10.09	24.33	10.16	24.01	10.03	23.34	9.78
	-9.8	-11.0	25.57	9.76	25.17	9.96	24.78	10.17	24.58	10.28	24.29	10.22	23.64	9.96
	-9.5	-10.0	25.69	9.73	25.29	9.95	24.88	10.14	24.68	10.23	24.42	10.25	23.78	10.01
	-8.5	-9.1	25.79	9.78	25.38	9.97	24.97	10.15	24.77	10.28	24.54	10.34	23.91	10.09
	-7.0	-7.6	25.95	9.80	25.54	10.02	25.12	10.21	24.91	10.33	24.71	10.43	24.10	10.24
	-5.0	-5.6	25.71	9.68	25.29	9.89	24.87	10.10	24.66	10.19	24.45	10.28	23.87	10.11
	-3.0	-3.7	26.63	9.87	26.19	10.08	25.75	10.29	25.54	10.38	25.32	10.49	24.59	10.00
	0.0	-0.7	28.88	10.46	28.41	10.68	27.93	10.90	27.70	10.99	27.32	10.74	26.45	10.18
	3.0	2.2	32.44	11.51	31.92	11.74	31.30	11.78	30.96	11.69	30.44	11.39	29.34	10.70
	5.0	4.1	35.36	12.37	34.79	12.62	33.90	12.21	33.50	12.13	32.90	11.76	31.64	10.95
	7.0	6.0	40.48	13.98	39.78	14.12	38.11	13.11	37.66	13.02	36.97	12.61	34.38	11.31
	9.0	7.9	41.79	14.24	40.26	13.72	38.93	12.78	38.54	12.71	37.83	12.30	34.38	10.68
	11.0	9.8	43.05	14.41	41.37	13.50	40.14	12.53	39.54	12.40	37.83	11.65	34.38	10.12
	13.0	11.8	43.55	13.98	42.17	13.15	40.14	11.88	39.54	11.75	37.83	11.01	34.38	9.59
15.0	13.7	44.68	13.71	43.40	12.87	40.14	11.26	39.54	11.10	37.83	10.42	34.38	9.05	
18.0	16.6	46.14	12.82	43.40	11.47	40.14	10.10	39.54	9.78	37.83	9.13	34.38	7.94	
21.0	19.5	48.02	12.59	43.40	10.73	40.14	9.47	39.54	9.07	37.83	8.41	34.38	7.28	
24.0	22.4	48.14	11.87	43.40	10.07	40.14	8.79	39.54	8.38	37.83	7.70	34.38	6.69	
27.0	25.3	48.14	11.10	43.40	9.38	40.14	8.10	39.54	7.63	37.83	6.98	34.38	6.15	
30.0	28.1	48.14	10.38	44.84	9.02	41.28	7.68	39.54	6.94	37.83	6.33	34.38	5.65	
100%	-30.0	-30.5	23.71	9.05	23.26	9.19	22.80	9.07	22.57	9.04	22.34	9.02	21.89	8.87
	-25.0	-25.4	23.71	9.17	23.26	9.31	22.80	9.19	22.57	9.13	22.34	9.10	21.89	8.98
	-19.8	-20.0	23.96	9.40	23.52	9.53	22.80	9.31	22.57	9.22	22.34	9.17	21.89	9.09
	-18.8	-19.0	24.04	9.44	23.98	9.76	23.05	9.45	22.57	9.25	22.34	9.18	21.89	9.09
	-16.7	-17.0	24.65	9.71	24.29	9.95	23.63	9.72	23.33	9.66	22.66	9.40	22.07	9.20
	-13.7	-15.0	24.92	9.89	24.55	10.13	23.96	10.00	23.63	9.89	23.29	9.77	22.62	9.54
	-11.8	-13.0	25.18	10.00	24.80	10.22	24.28	10.17	23.95	10.06	23.61	9.94	22.96	9.69
	-9.8	-11.0	25.42	10.09	25.02	10.30	24.57	10.39	24.24	10.25	23.92	10.14	23.29	9.90
	-9.5	-10.0	25.53	10.08	25.13	10.27	24.69	10.38	24.38	10.28	24.06	10.16	23.43	9.92
	-8.5	-9.1	25.63	10.12	25.23	10.30	24.80	10.50	24.49	10.38	24.19	10.28	23.56	10.04
	-7.0	-7.6	25.79	10.17	25.38	10.37	24.97	10.59	24.68	10.50	24.38	10.40	23.73	10.11
	-5.0	-5.6	25.55	10.05	25.13	10.26	24.72	10.48	24.48	10.50	24.14	10.27	23.36	9.63
	-3.0	-3.7	26.46	10.24	26.03	10.48	25.60	10.70	25.23	10.42	24.87	10.15	24.03	9.46
	0.0	-0.7	28.70	10.88	28.23	11.12	27.62	10.96	27.20	10.65	26.77	10.35	25.82	9.57
	3.0	2.2	32.23	12.00	31.53	11.82	30.73	11.61	30.21	11.19	29.67	10.87	28.54	9.93
	5.0	4.1	35.12	12.91	34.14	12.27	33.19	11.98	32.60	11.53	31.54	11.00	30.46	10.01
	7.0	6.0	39.46	13.89	38.25	13.13	37.50	12.93	35.96	12.10	34.38	11.36	31.25	9.79
	9.0	7.9	40.58	13.70	39.47	12.93	37.50	12.30	35.96	11.48	34.38	10.76	31.25	9.29
	11.0	9.8	41.50	13.38	39.47	12.27	37.50	11.68	35.96	10.88	34.38	10.20	31.25	8.75
	13.0	11.8	42.74	13.14	39.47	11.67	37.50	11.03	35.96	10.27	34.38	9.65	31.25	8.20
	15.0	13.7	43.99	12.86	39.47	11.02	37.50	10.44	35.96	9.73	34.38	9.11	31.25	7.64
18.0	16.6	43.99	11.48	39.47	9.91	37.50	9.08	35.96	8.52	34.38	7.98	31.25	6.98	
21.0	19.5	43.99	10.76	39.47	9.25	37.50	8.32	35.96	7.80	34.38	7.29	31.25	6.46	
24.0	22.4	43.99	10.08	39.47	8.59	37.50	7.62	35.96	7.08	34.38	6.72	31.25	5.97	
27.0	25.3	43.99	9.38	39.47	7.87	37.50	6.91	35.96	6.54	34.38	6.18	31.25	5.46	
30.0	28.1	44.02	8.72	40.29	7.37	37.50	6.26	35.96	6.05	34.38	5.68	31.25	5.00	

**Abbreviations:**

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

**Notes:**

Shaded cells indicate rating condition.

*Table continued on next page ...*

Part 2 - Outdoor Unit Engineering Data

# MDV8 ECO VRF 50Hz



Table 2-8.16: 12HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
90%	-30.0	-30.5	21.34	8.38	20.93	8.36	20.52	8.37	20.31	8.23	20.11	8.16	19.70	8.22
	-25.0	-25.4	21.34	8.53	20.93	8.48	20.52	8.40	20.31	8.32	20.11	8.26	19.70	8.22
	-19.8	-20.0	22.32	9.08	21.71	8.92	20.77	8.53	20.53	8.49	20.28	8.44	19.70	8.23
	-18.8	-19.0	22.48	9.24	21.87	9.02	21.21	8.75	20.62	8.56	20.37	8.50	19.70	8.25
	-16.7	-17.0	22.71	9.36	22.15	9.18	21.53	8.96	21.21	8.84	20.93	8.74	20.30	8.52
	-13.7	-15.0	22.94	9.52	22.40	9.40	21.83	9.22	21.52	9.07	21.24	9.00	20.61	8.74
	-11.8	-13.0	23.14	9.60	22.64	9.54	22.07	9.33	21.78	9.22	21.49	9.12	20.92	8.94
	-9.8	-11.0	23.34	9.70	22.88	9.71	22.32	9.49	22.04	9.39	21.76	9.30	21.19	9.09
	-9.5	-10.0	23.43	9.70	22.99	9.76	22.44	9.53	22.15	9.43	21.88	9.32	21.32	9.12
	-8.5	-9.1	23.51	9.73	23.09	9.80	22.53	9.59	22.26	9.50	21.98	9.40	21.35	9.06
	-7.0	-7.6	23.64	9.79	23.24	9.92	22.69	9.70	22.42	9.61	22.10	9.39	21.35	8.79
	-5.0	-5.6	23.39	9.68	23.00	9.88	22.41	9.49	22.06	9.22	21.73	8.95	20.99	8.31
	-3.0	-3.7	24.22	9.91	23.75	9.91	23.09	9.39	22.73	9.09	22.36	8.77	21.57	8.09
	0.0	-0.7	26.26	10.48	25.64	10.20	24.90	9.59	24.50	9.24	24.08	8.87	23.19	8.19
	3.0	2.2	29.37	11.17	28.56	10.78	27.66	10.07	27.18	9.66	26.70	9.26	25.68	8.52
	5.0	4.1	31.85	11.58	30.90	11.17	29.87	10.36	29.33	9.89	28.38	9.34	27.41	8.61
	7.0	6.0	36.24	12.60	34.73	11.95	33.75	11.07	32.34	10.33	30.94	9.65	27.41	8.11
	9.0	7.9	36.66	12.18	35.53	11.59	33.76	10.48	32.34	9.80	30.94	9.14	27.41	7.53
	11.0	9.8	37.64	11.88	36.57	11.31	33.76	9.96	32.34	9.29	30.94	8.61	27.41	7.19
	13.0	11.8	38.47	11.51	36.57	10.67	33.76	9.38	32.34	8.73	30.94	8.05	27.41	6.81
15.0	13.7	39.38	11.15	36.57	10.12	33.76	8.84	32.34	8.17	30.94	7.52	27.41	6.52	
18.0	16.6	39.38	9.77	36.57	8.79	33.76	7.77	32.34	7.34	30.94	6.92	27.41	6.05	
21.0	19.5	39.38	9.12	36.57	8.11	33.76	7.15	32.34	6.78	30.94	6.43	27.41	5.59	
24.0	22.4	39.38	8.44	36.57	7.36	33.76	6.57	32.34	6.25	30.94	5.94	27.41	5.18	
27.0	25.3	39.38	7.72	36.57	6.72	33.76	6.06	32.34	5.74	30.94	5.45	27.41	4.70	
30.0	28.1	39.38	7.07	36.57	6.13	33.76	5.59	32.34	5.28	30.94	5.01	27.41	4.27	
80%	-30.0	-30.5	18.97	7.53	18.60	7.39	18.24	7.56	18.06	7.43	17.88	7.35	17.51	7.41
	-25.0	-25.4	19.20	7.77	18.60	7.56	18.24	7.57	18.06	7.51	17.88	7.42	17.51	7.39
	-19.8	-20.0	20.09	8.28	19.56	8.12	18.97	7.88	18.75	7.89	18.44	7.72	17.68	7.45
	-18.8	-19.0	20.23	8.39	19.70	8.21	19.12	7.97	18.82	7.84	18.56	7.77	17.76	7.50
	-16.7	-17.0	20.42	8.50	19.90	8.31	19.36	8.10	19.11	8.03	18.85	7.98	18.30	7.75
	-13.7	-15.0	20.64	8.70	20.12	8.51	19.63	8.36	19.35	8.23	19.10	8.15	18.57	7.95
	-11.8	-13.0	20.84	8.83	20.34	8.65	19.83	8.45	19.58	8.38	19.33	8.29	18.82	8.09
	-9.8	-11.0	21.03	8.97	20.53	8.78	20.04	8.59	19.80	8.52	19.55	8.44	18.97	8.09
	-9.5	-10.0	21.12	8.98	20.63	8.80	20.14	8.62	19.89	8.54	19.64	8.41	18.97	7.89
	-8.5	-9.1	21.19	9.05	20.71	8.89	20.22	8.70	19.95	8.55	19.64	8.30	18.97	7.77
	-7.0	-7.6	21.32	9.17	20.83	8.96	20.27	8.60	19.95	8.32	19.64	8.07	18.97	7.56
	-5.0	-5.6	21.08	9.11	20.50	8.61	19.92	8.14	19.62	7.90	19.32	7.67	18.65	7.18
	-3.0	-3.7	21.72	8.98	21.11	8.47	20.50	7.97	20.19	7.71	19.86	7.46	19.17	7.02
	0.0	-0.7	23.45	9.22	22.78	8.62	22.10	8.08	21.74	7.80	21.37	7.56	20.59	7.07
	3.0	2.2	26.16	9.78	25.39	9.06	24.58	8.43	24.16	8.16	23.73	7.89	22.80	7.31
	5.0	4.1	28.34	10.08	27.47	9.31	26.55	8.68	26.08	8.34	25.22	7.92	24.36	7.35
	7.0	6.0	32.22	10.89	30.87	9.90	30.00	9.28	26.08	7.89	25.22	7.47	24.36	6.82
	9.0	7.9	32.58	10.44	31.58	9.60	30.00	8.74	26.08	7.29	25.22	6.90	24.36	6.42
	11.0	9.8	33.45	10.14	32.51	9.37	30.00	8.24	26.08	6.92	25.22	6.55	24.36	6.16
	13.0	11.8	34.20	9.80	32.51	8.80	30.00	7.67	26.08	6.56	25.22	6.23	24.36	5.85
15.0	13.7	35.00	9.50	32.51	8.24	30.00	7.23	26.08	6.24	25.22	5.96	24.36	5.61	
18.0	16.6	35.00	8.26	32.51	7.43	30.00	6.73	26.08	5.79	25.22	5.57	24.36	5.23	
21.0	19.5	35.00	7.61	32.51	6.84	30.00	6.22	26.08	5.37	25.22	5.19	24.36	4.87	
24.0	22.4	35.00	6.92	32.51	6.32	30.00	5.72	26.08	4.96	25.22	4.75	24.36	4.51	
27.0	25.3	35.00	6.38	32.51	5.80	30.00	5.27	26.08	4.55	25.22	4.33	24.36	3.95	
30.0	28.1	35.00	5.88	32.51	5.32	30.00	4.86	26.08	4.17	25.22	3.95	24.36	3.47	

Abbreviations:  
 CR: Combination ratio  
 TC: Total capacity (kW)  
 PI: Power input (compressor + outdoor fan motor) (kW)  
 Notes:  
 Shaded cells indicate rating condition.

Table continued on next page ...



Table 2-8.16: 12HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
70%	-30.0	-30.5	16.60	6.66	16.28	6.65	15.96	6.67	15.80	6.60	15.64	6.64	15.32	6.67
	-25.0	-25.4	17.23	7.05	16.78	6.95	16.11	6.74	15.80	6.64	15.64	6.63	15.32	6.61
	-19.8	-20.0	17.79	7.41	17.34	7.28	16.84	7.07	16.64	7.02	16.34	6.91	15.54	6.65
	-18.8	-19.0	17.88	7.45	17.43	7.29	16.96	7.16	16.73	7.07	16.49	6.97	15.93	6.83
	-16.7	-17.0	18.07	7.61	17.63	7.45	17.17	7.27	16.94	7.19	16.72	7.12	16.19	6.92
	-13.7	-15.0	18.26	7.78	17.81	7.61	17.37	7.44	17.15	7.38	16.92	7.31	16.45	7.11
	-11.8	-13.0	18.42	7.89	17.99	7.72	17.55	7.58	17.33	7.49	17.12	7.41	16.59	7.14
	-9.8	-11.0	18.58	8.01	18.15	7.84	17.72	7.68	17.46	7.49	17.17	7.26	16.59	6.89
	-9.5	-10.0	18.65	8.00	18.22	7.84	17.73	7.52	17.46	7.30	17.18	7.09	16.59	6.74
	-8.5	-9.1	18.71	8.07	18.26	7.84	17.73	7.40	17.46	7.19	17.17	6.99	16.59	6.65
	-7.0	-7.6	18.77	8.03	18.26	7.63	17.73	7.18	17.46	6.99	17.18	6.84	16.59	6.47
	-5.0	-5.6	18.45	7.65	17.95	7.26	17.42	6.80	17.15	6.63	16.88	6.46	16.31	6.13
	-3.0	-3.7	19.00	7.51	18.48	7.07	17.92	6.67	17.65	6.52	17.36	6.33	16.76	6.00
	0.0	-0.7	20.51	7.64	19.93	7.17	19.30	6.77	19.00	6.59	18.64	6.34	17.96	5.97
	3.0	2.2	22.89	8.02	22.22	7.54	21.49	7.06	21.12	6.83	20.68	6.56	19.56	6.06
	5.0	4.1	24.80	8.25	24.03	7.73	23.15	7.18	22.70	6.91	21.97	6.56	19.56	5.80
	7.0	6.0	28.19	8.89	26.77	8.13	23.15	6.72	22.70	6.46	21.97	6.15	19.56	5.33
	9.0	7.9	28.50	8.49	27.63	7.74	23.15	6.22	22.70	6.02	21.97	5.80	19.56	5.07
	11.0	9.8	29.05	8.14	27.63	7.31	23.15	5.97	22.70	5.76	21.97	5.53	19.56	4.83
	13.0	11.8	29.92	7.81	27.63	6.92	23.15	5.67	22.70	5.48	21.97	5.25	19.56	4.57
15.0	13.7	29.92	7.31	27.63	6.63	23.15	5.43	22.70	5.24	21.97	5.02	19.56	4.37	
18.0	16.6	29.92	6.75	27.63	6.18	23.15	5.09	22.70	4.89	21.97	4.69	19.56	4.05	
21.0	19.5	29.92	6.24	27.63	5.72	23.15	4.74	22.70	4.60	21.97	4.35	19.56	3.75	
24.0	22.4	29.92	5.79	27.63	5.27	23.15	4.37	22.70	4.27	21.97	3.99	19.56	3.45	
27.0	25.3	29.92	5.30	27.63	4.77	23.15	3.87	22.70	3.70	21.97	3.59	19.56	3.05	
30.0	28.1	29.92	4.84	27.63	4.32	23.15	3.42	22.70	3.20	21.97	3.22	21.30	2.93	
60%	-30.0	-30.5	14.39	5.99	13.95	5.75	13.68	5.77	13.54	5.75	13.41	5.85	13.13	6.86
	-25.0	-25.4	15.04	6.30	14.59	6.10	13.79	5.86	13.54	5.79	13.41	5.82	13.13	6.26
	-19.8	-20.0	15.46	6.52	15.08	6.40	14.64	6.27	14.39	6.20	14.14	6.11	13.61	5.93
	-18.8	-19.0	15.53	6.56	15.15	6.44	14.71	6.29	14.47	6.20	14.23	6.11	13.73	5.95
	-16.7	-17.0	15.68	6.66	15.30	6.53	14.90	6.39	14.68	6.30	14.46	6.26	14.01	6.10
	-13.7	-15.0	15.82	6.82	15.45	6.68	15.07	6.55	14.86	6.47	14.65	6.40	14.22	6.24
	-11.8	-13.0	15.96	6.91	15.59	6.78	15.19	6.57	14.96	6.45	14.71	6.30	14.21	6.02
	-9.8	-11.0	16.08	7.00	15.65	6.67	15.19	6.38	14.96	6.22	14.71	6.09	14.22	5.81
	-9.5	-10.0	16.09	6.85	15.65	6.50	15.19	6.23	14.96	6.11	14.71	5.98	14.21	5.67
	-8.5	-9.1	16.09	6.74	15.65	6.41	15.19	6.14	14.96	6.02	14.71	5.86	14.22	5.58
	-7.0	-7.6	16.09	6.54	15.65	6.26	15.19	6.00	14.95	5.82	14.71	5.69	14.21	5.40
	-5.0	-5.6	15.80	6.19	15.37	5.93	14.93	5.66	14.70	5.52	14.46	5.40	13.98	5.15
	-3.0	-3.7	16.27	6.08	15.82	5.81	15.35	5.54	15.12	5.41	14.87	5.30	14.36	5.07
	0.0	-0.7	17.55	6.19	17.05	5.89	16.52	5.60	16.23	5.41	15.96	5.32	15.36	5.11
	3.0	2.2	19.59	6.49	19.00	6.14	18.35	5.78	17.98	5.62	17.64	5.48	16.75	5.21
	5.0	4.1	21.17	6.61	20.46	6.19	19.73	5.92	19.11	5.69	18.83	5.61	16.75	4.99
	7.0	6.0	23.67	6.91	22.95	6.46	19.73	5.47	19.11	5.24	18.83	5.11	16.75	4.47
	9.0	7.9	24.15	6.52	23.68	6.27	19.73	5.15	19.11	4.96	18.83	4.85	18.15	4.64
	11.0	9.8	24.90	6.46	23.68	6.00	19.73	4.94	19.11	4.74	18.83	4.63	18.15	4.40
	13.0	11.8	25.65	6.30	23.68	5.72	19.73	4.69	19.11	4.49	18.83	4.41	18.15	4.21
15.0	13.7	25.65	6.03	23.68	5.48	19.73	4.47	19.11	4.28	18.83	4.18	18.15	4.00	
18.0	16.6	25.65	5.66	23.68	5.11	19.73	4.14	19.11	3.98	18.83	3.89	18.15	3.66	
21.0	19.5	25.65	5.28	23.68	4.74	19.73	3.85	19.11	3.67	18.83	3.57	18.15	3.38	
24.0	22.4	25.65	4.87	23.68	4.40	19.73	3.57	19.11	3.37	18.83	3.27	18.15	3.03	
27.0	25.3	25.65	4.31	23.68	3.86	19.73	3.11	19.11	2.98	18.83	2.89	18.15	2.72	
30.0	28.1	25.65	3.80	23.68	3.39	19.73	2.71	19.11	2.64	18.83	2.55	18.15	2.44	

**Abbreviations:**

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

**Notes:**

Shaded cells indicate rating condition.

*Table continued on next page ...*

Table2-8.16:12HP heating capacity(continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
50%	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
	-30.0	-30.5	12.26	5.22	11.63	4.98	11.40	5.04	11.29	5.07	11.17	5.78	10.94	18.54
	-25.0	-25.4	12.68	5.43	12.14	5.24	11.40	5.00	11.29	5.01	11.17	5.33	10.94	9.48
	-19.8	-20.0	13.04	5.61	12.66	5.51	12.24	5.33	12.06	5.29	11.83	5.22	11.40	5.06
	-18.8	-19.0	13.09	5.62	12.73	5.51	12.34	5.37	12.15	5.33	11.95	5.26	11.55	5.14
	-16.7	-17.0	13.22	5.72	12.87	5.61	12.52	5.48	12.34	5.42	12.16	5.36	11.79	5.24
	-13.7	-15.0	13.34	5.84	13.00	5.72	12.66	5.59	12.46	5.46	12.26	5.37	11.84	5.16
	-11.8	-13.0	13.40	5.83	13.04	5.60	12.65	5.39	12.46	5.30	12.26	5.18	11.84	4.95
	-9.8	-11.0	13.40	5.62	13.04	5.42	12.66	5.21	12.46	5.10	12.26	4.99	11.84	4.82
	-9.5	-10.0	13.40	5.51	13.04	5.30	12.66	5.09	12.46	4.97	12.26	4.86	11.84	4.73
	-8.5	-9.1	13.40	5.42	13.04	5.22	12.66	5.00	12.46	4.88	12.26	4.78	11.84	4.66
	-7.0	-7.6	13.40	5.27	13.04	5.06	12.65	4.84	12.46	4.75	12.26	4.69	11.84	4.55
	-5.0	-5.6	13.16	5.00	12.80	4.79	12.44	4.62	12.25	4.55	12.05	4.48	11.64	4.35
	-3.0	-3.7	13.55	4.89	13.18	4.70	12.80	4.55	12.60	4.48	12.39	4.43	11.96	4.31
	0.0	-0.7	14.58	4.89	14.17	4.74	13.73	4.58	13.50	4.50	13.28	4.43	12.80	4.31
	3.0	2.2	16.23	5.09	15.74	4.94	15.23	4.76	14.96	4.70	14.69	4.61	13.96	4.41
	5.0	4.1	17.56	5.26	17.01	5.10	16.43	4.92	15.92	4.78	15.69	4.67	15.23	4.36
	7.0	6.0	19.71	5.43	19.12	5.22	16.43	4.40	17.31	4.64	15.69	4.17	15.23	4.00
	9.0	7.9	20.12	5.26	19.12	4.95	18.07	4.64	17.31	4.41	15.69	3.99	15.23	3.83
	11.0	9.8	20.75	5.17	19.12	4.71	18.07	4.40	17.31	4.21	15.69	3.79	15.23	3.62
13.0	11.8	20.75	4.90	19.12	4.48	18.07	4.21	17.31	3.99	15.69	3.61	15.23	3.47	
15.0	13.7	20.75	4.69	19.66	4.41	18.07	3.98	17.31	3.78	15.69	3.42	15.23	3.31	
18.0	16.6	20.75	4.35	19.66	4.05	18.07	3.67	17.31	3.52	15.69	3.14	15.62	3.26	
21.0	19.5	20.75	4.01	19.66	3.72	18.07	3.38	17.31	3.19	15.69	2.87	15.62	2.82	
24.0	22.4	20.75	3.68	19.66	3.43	18.07	3.03	17.31	2.89	16.61	2.77	15.62	2.75	
27.0	25.3	20.75	3.28	19.66	3.01	18.07	2.72	17.31	2.58	16.61	2.44	15.62	2.40	
30.0	28.1	21.09	2.97	19.66	2.65	18.07	2.44	17.31	2.31	16.61	2.15	15.62	2.09	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table2-8.17:14HP heating capacity

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
130%	-30.0	-30.5	31.70	11.54	31.09	11.92	30.48	12.28	30.17	12.49	29.87	12.63	29.26	13.02
	-25.0	-25.4	31.70	11.65	31.09	11.96	30.48	12.29	30.17	12.46	29.87	12.58	29.26	12.92
	-19.8	-20.0	31.70	11.76	31.09	12.01	30.48	12.29	30.17	12.43	29.87	12.53	29.26	12.82
	-18.8	-19.0	31.70	11.75	31.09	11.99	30.48	12.27	30.17	12.39	29.87	12.50	29.26	12.78
	-16.7	-17.0	31.70	11.70	31.09	11.96	30.48	12.22	30.42	12.44	30.15	12.57	29.60	12.85
	-13.7	-15.0	32.00	11.84	31.45	12.09	30.90	12.39	30.62	12.53	30.81	12.85	30.32	13.15
	-11.8	-13.0	32.72	12.02	32.21	12.28	31.70	12.60	31.44	12.74	31.18	12.90	30.67	13.18
	-9.8	-11.0	33.11	12.06	32.58	12.33	32.06	12.63	31.79	12.78	31.53	12.90	31.00	13.19
	-9.5	-10.0	33.30	12.01	32.76	12.32	32.23	12.57	31.96	12.72	31.69	12.86	31.16	13.14
	-8.5	-9.1	33.46	12.03	32.92	12.32	32.38	12.59	32.11	12.73	31.84	12.86	31.29	13.15
	-7.0	-7.6	33.72	12.04	33.17	12.33	32.62	12.58	32.35	12.72	32.07	12.85	31.52	13.12
	-5.0	-5.6	33.48	11.85	32.92	12.13	32.37	12.37	32.09	12.49	31.81	12.63	31.26	12.88
	-3.0	-3.7	34.70	12.03	34.13	12.29	33.55	12.55	33.26	12.65	32.97	12.79	32.39	13.06
	0.0	-0.7	37.65	12.59	37.03	12.85	36.41	13.14	36.09	13.26	35.78	13.40	35.15	13.68
	3.0	2.2	42.25	13.67	41.56	13.98	40.87	14.29	40.53	14.42	40.18	14.58	39.48	14.88
	5.0	4.1	45.99	14.60	45.25	14.94	44.52	15.25	44.14	15.41	43.77	15.58	42.72	15.26
	7.0	6.0	52.14	16.23	51.13	16.54	50.13	16.84	50.04	17.12	49.58	17.30	48.12	16.12
	9.0	7.9	53.80	16.42	52.77	16.74	52.14	17.17	51.66	17.36	51.11	17.28	48.76	15.28
	11.0	9.8	55.47	16.62	54.41	16.94	53.78	17.40	53.27	17.48	52.27	16.53	48.76	14.25
	13.0	11.8	57.14	16.79	56.04	17.10	55.44	17.60	54.39	16.67	53.62	15.82	48.76	13.22
15.0	13.7	58.81	16.99	58.12	17.46	56.55	16.85	55.98	16.04	53.62	14.77	48.76	12.28	
18.0	16.6	58.81	17.76	60.13	16.85	56.55	14.61	55.98	13.83	53.62	12.65	48.76	10.62	
21.0	19.5	58.81	16.89	60.13	15.87	56.55	13.64	55.98	12.79	53.62	11.67	48.76	9.83	
24.0	22.4	58.81	15.44	60.13	14.50	56.55	12.38	55.98	11.65	53.62	10.70	48.76	8.99	
27.0	25.3	58.81	13.80	60.13	12.89	56.55	10.91	55.98	10.44	53.62	9.71	48.76	8.18	
30.0	28.1	58.81	12.33	60.13	11.47	56.55	9.61	55.98	9.35	53.62	8.82	48.76	7.44	
120%	-30.0	-30.5	30.30	11.36	29.72	11.70	29.14	12.01	28.85	12.21	28.56	12.40	27.97	12.76
	-25.0	-25.4	30.30	11.43	29.72	11.73	29.14	12.02	28.85	12.18	28.56	12.34	27.97	12.66
	-19.8	-20.0	30.30	11.49	29.72	11.76	29.14	12.03	28.85	12.16	28.56	12.29	27.97	12.56
	-18.8	-19.0	30.30	11.48	29.72	11.75	29.14	12.01	28.85	12.13	28.78	12.36	28.26	12.66
	-16.7	-17.0	30.55	11.55	30.02	11.84	29.50	12.09	29.23	12.25	28.97	12.36	28.92	12.86
	-13.7	-15.0	30.75	11.67	30.72	12.14	30.23	12.44	29.99	12.56	29.75	12.71	29.26	13.02
	-11.8	-13.0	31.59	11.90	31.09	12.18	30.59	12.47	30.34	12.60	30.09	12.74	29.59	13.04
	-9.8	-11.0	31.94	11.95	31.43	12.22	30.92	12.48	30.66	12.62	30.41	12.76	29.89	13.04
	-9.5	-10.0	32.12	11.89	31.60	12.17	31.08	12.43	30.82	12.57	30.56	12.71	30.04	12.99
	-8.5	-9.1	32.27	11.92	31.74	12.20	31.22	12.45	30.96	12.59	30.69	12.73	30.16	13.00
	-7.0	-7.6	32.51	11.94	31.97	12.21	31.44	12.46	31.17	12.59	30.90	12.72	30.37	12.98
	-5.0	-5.6	32.25	11.74	31.72	12.00	31.18	12.26	30.91	12.37	30.64	12.51	30.10	12.76
	-3.0	-3.7	33.42	11.90	32.87	12.16	32.31	12.42	32.03	12.55	31.75	12.68	31.19	12.94
	0.0	-0.7	36.26	12.51	35.66	12.78	35.06	13.05	34.75	13.18	34.45	13.29	33.80	13.46
	3.0	2.2	40.72	13.61	40.05	13.90	39.38	14.20	39.04	14.36	38.71	14.50	37.60	13.78
	5.0	4.1	44.35	14.55	43.64	14.87	42.92	15.20	42.55	15.36	42.08	15.28	40.50	13.73
	7.0	6.0	50.27	16.19	49.39	16.52	48.51	16.86	48.04	16.92	47.32	16.11	40.50	12.82
	9.0	7.9	51.91	16.41	51.00	16.74	50.08	17.06	49.36	16.32	48.47	15.46	40.50	11.95
	11.0	9.8	53.54	16.61	52.60	16.97	51.42	16.44	50.48	15.62	49.50	14.73	40.50	11.12
	13.0	11.8	55.20	16.84	54.22	17.20	52.53	15.65	51.75	14.88	49.50	13.69	40.50	10.28
15.0	13.7	56.84	17.07	55.61	16.60	53.99	15.03	51.75	13.84	49.50	12.71	40.50	9.48	
18.0	16.6	58.61	16.39	57.49	14.89	53.99	12.87	51.75	11.74	49.50	10.92	40.50	8.51	
21.0	19.5	58.61	15.35	57.49	13.84	53.99	11.82	51.75	10.91	49.50	10.15	40.50	7.73	
24.0	22.4	58.61	14.06	57.49	12.64	53.99	10.84	51.75	10.11	49.50	9.38	40.50	7.03	
27.0	25.3	58.61	12.51	57.49	11.15	53.99	9.82	51.75	9.15	49.50	8.49	40.50	6.28	
30.0	28.1	58.61	11.14	57.49	9.83	53.99	8.90	51.75	8.27	49.50	7.68	40.50	5.61	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

# MDV8 ECO VRF 50Hz



Table 2-8.17: 14HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
110%	-30.0	-30.5	28.63	11.00	28.07	11.35	27.52	11.70	27.25	11.86	26.97	12.06	26.42	12.40
	-25.0	-25.4	28.63	11.08	28.07	11.38	27.52	11.68	27.25	11.83	26.97	11.99	26.42	12.29
	-19.8	-20.0	28.63	11.15	28.07	11.42	27.78	11.76	27.54	11.92	27.29	12.05	26.80	12.35
	-18.8	-19.0	28.86	11.24	28.37	11.53	27.87	11.78	27.63	11.93	27.38	12.08	27.34	12.56
	-16.7	-17.0	29.49	11.47	29.03	11.77	28.58	12.03	28.35	12.19	28.12	12.34	27.67	12.66
	-13.7	-15.0	29.85	11.63	29.39	11.91	28.92	12.22	28.68	12.36	28.45	12.50	27.98	12.78
	-11.8	-13.0	30.20	11.69	29.72	11.95	29.23	12.24	28.99	12.37	28.75	12.52	28.27	12.82
	-9.8	-11.0	30.52	11.74	30.03	12.01	29.53	12.29	29.29	12.42	29.04	12.54	28.54	12.84
	-9.5	-10.0	30.68	11.70	30.18	11.96	29.68	12.22	29.43	12.34	29.18	12.47	28.67	12.75
	-8.5	-9.1	30.81	11.72	30.31	11.97	29.80	12.25	29.55	12.36	29.29	12.50	28.79	12.77
	-7.0	-7.6	31.02	11.73	30.51	11.99	30.00	12.25	29.74	12.38	29.48	12.50	28.97	12.78
	-5.0	-5.6	30.75	11.54	30.24	11.79	29.72	12.05	29.46	12.17	29.20	12.30	28.69	12.54
	-3.0	-3.7	31.86	11.74	31.33	11.98	30.79	12.23	30.52	12.36	30.25	12.48	29.59	12.38
	0.0	-0.7	34.58	12.34	34.00	12.60	33.41	12.86	33.12	13.01	32.83	13.14	31.83	12.26
	3.0	2.2	38.85	13.49	38.21	13.77	37.57	14.05	37.16	13.99	36.59	13.51	35.39	12.47
	5.0	4.1	42.36	14.44	41.66	14.75	40.90	14.90	40.20	14.22	39.48	13.52	38.04	12.29
	7.0	6.0	48.51	16.23	47.73	16.59	45.85	15.66	45.19	14.99	44.36	14.21	38.04	11.32
	9.0	7.9	50.10	16.50	49.24	16.73	47.11	15.06	46.25	14.31	44.36	13.22	38.04	10.51
	11.0	9.8	51.70	16.74	49.75	15.89	48.17	14.38	47.44	13.70	44.36	12.33	38.04	9.71
	13.0	11.8	53.25	16.85	51.03	15.18	49.50	13.74	47.44	12.68	44.36	11.38	38.04	9.13
15.0	13.7	53.74	15.90	52.09	14.47	49.50	12.80	47.44	11.77	44.36	10.54	38.04	8.64	
18.0	16.6	55.37	14.16	52.09	12.32	49.50	10.92	47.44	10.22	44.36	9.35	38.04	7.67	
21.0	19.5	57.63	13.68	52.09	11.41	49.50	10.13	47.44	9.49	44.36	8.63	38.04	6.92	
24.0	22.4	57.63	12.50	52.09	10.45	49.50	9.35	47.44	8.66	44.36	7.81	38.04	6.29	
27.0	25.3	57.63	11.03	52.09	9.47	49.50	8.49	47.44	7.87	44.36	7.03	38.04	5.70	
30.0	28.1	57.63	9.73	52.09	8.57	49.50	7.71	47.44	7.16	44.36	6.33	38.04	5.16	
100%	-30.0	-30.5	28.45	11.30	27.91	11.60	27.36	11.96	27.09	12.17	26.81	12.36	26.27	12.70
	-25.0	-25.4	28.45	11.36	27.91	11.65	27.36	11.97	27.09	12.12	26.81	12.28	26.27	12.59
	-19.8	-20.0	28.45	11.43	27.91	11.71	27.61	12.08	27.37	12.19	27.13	12.35	26.64	12.65
	-18.8	-19.0	28.69	11.52	28.20	11.81	27.71	12.09	27.46	12.22	27.62	12.55	27.19	12.88
	-16.7	-17.0	29.31	11.77	28.86	12.06	28.41	12.37	28.18	12.51	27.96	12.65	27.51	12.97
	-13.7	-15.0	29.67	11.94	29.21	12.23	28.75	12.53	28.52	12.67	28.28	12.82	27.82	13.13
	-11.8	-13.0	30.02	12.01	29.54	12.28	29.06	12.57	28.82	12.73	28.59	12.86	28.11	13.16
	-9.8	-11.0	30.33	12.08	29.85	12.32	29.36	12.62	29.11	12.75	28.87	12.88	28.38	13.18
	-9.5	-10.0	30.48	12.04	29.99	12.30	29.49	12.58	29.25	12.71	29.00	12.85	28.50	13.13
	-8.5	-9.1	30.61	12.06	30.11	12.34	29.61	12.60	29.36	12.73	29.11	12.88	28.61	13.15
	-7.0	-7.6	30.82	12.10	30.31	12.37	29.81	12.62	29.55	12.76	29.30	12.89	28.63	12.73
	-5.0	-5.6	30.55	11.93	30.04	12.18	29.53	12.43	29.27	12.56	29.02	12.69	28.14	11.89
	-3.0	-3.7	31.65	12.12	31.12	12.38	30.59	12.64	30.32	12.77	29.95	12.58	28.93	11.51
	0.0	-0.7	34.34	12.78	33.77	13.05	33.19	13.32	32.66	12.77	32.22	12.50	31.04	11.25
	3.0	2.2	38.59	13.98	37.95	14.28	36.97	13.70	36.32	13.03	35.80	12.69	34.35	11.21
	5.0	4.1	42.07	14.98	41.20	14.90	39.85	13.67	39.11	12.96	38.48	12.51	36.55	10.93
	7.0	6.0	47.48	16.65	46.30	15.68	45.00	14.38	39.11	12.09	38.48	11.50	36.55	10.12
	9.0	7.9	48.88	16.36	47.37	15.02	45.00	13.40	39.11	11.24	38.48	10.67	36.55	9.57
	11.0	9.8	50.18	15.76	48.75	14.43	45.00	12.46	39.11	10.43	38.48	9.85	36.55	9.04
	13.0	11.8	51.29	15.00	48.75	13.37	45.00	11.50	39.11	9.62	38.48	9.26	36.55	8.53
15.0	13.7	51.29	13.99	48.75	12.41	45.00	10.64	39.11	9.04	38.48	8.74	36.55	8.02	
18.0	16.6	51.29	11.86	48.75	10.68	45.00	9.49	39.11	8.07	38.48	7.76	36.55	7.09	
21.0	19.5	51.29	10.96	48.75	9.82	45.00	8.66	39.11	7.37	38.48	6.97	36.55	6.49	
24.0	22.4	51.29	10.17	48.75	9.07	45.00	7.87	39.11	6.62	38.48	6.34	36.55	5.93	
27.0	25.3	51.29	9.21	48.75	8.26	45.00	7.01	39.11	6.01	38.48	5.76	36.55	5.36	
30.0	28.1	51.29	8.34	48.75	7.51	45.00	6.24	39.11	5.45	38.48	5.24	36.55	4.85	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

Table 2-8.17: 14HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
°C DB / °C WB		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	
90%	-30.0	-30.5	25.61	10.49	25.12	10.83	24.62	11.11	24.38	11.28	24.13	11.43	23.64	11.56
	-25.0	-25.4	25.61	10.58	25.12	10.86	24.62	11.13	24.38	11.27	24.32	11.50	23.84	11.69
	-19.8	-20.0	26.56	11.05	26.15	11.34	25.75	11.66	25.55	11.81	25.34	11.97	24.94	12.27
	-18.8	-19.0	26.72	11.12	26.31	11.41	25.90	11.70	25.69	11.86	25.49	12.00	25.08	12.30
	-16.7	-17.0	27.04	11.23	26.61	11.50	26.19	11.80	25.98	11.95	25.76	12.09	25.34	12.39
	-13.7	-15.0	27.33	11.41	26.89	11.68	26.45	11.97	26.24	12.09	26.02	12.23	25.58	12.53
	-11.8	-13.0	27.60	11.49	27.15	11.75	26.70	12.02	26.48	12.16	26.26	12.29	25.76	12.45
	-9.8	-11.0	27.85	11.54	27.39	11.80	26.94	12.06	26.71	12.20	26.48	12.33	25.76	11.92
	-9.5	-10.0	27.97	11.52	27.51	11.78	27.05	12.03	26.82	12.15	26.59	12.28	25.76	11.58
	-8.5	-9.1	28.08	11.54	27.61	11.79	27.15	12.04	26.91	12.18	26.67	12.26	25.76	11.32
	-7.0	-7.6	28.25	11.59	27.77	11.83	27.30	12.07	27.07	12.20	26.67	11.84	25.76	10.90
	-5.0	-5.6	27.96	11.41	27.48	11.65	27.01	11.89	26.62	11.52	26.20	11.09	25.32	10.14
	-3.0	-3.7	28.96	11.60	28.47	11.84	27.82	11.59	27.39	11.14	26.96	10.70	26.03	9.76
	0.0	-0.7	31.44	12.27	30.80	12.19	29.96	11.51	29.47	11.00	28.96	10.44	27.91	9.41
	3.0	2.2	35.32	13.33	34.34	12.49	33.35	11.69	32.75	11.10	32.13	10.46	30.81	9.25
	5.0	4.1	38.25	13.53	37.08	12.46	35.91	11.50	35.20	10.83	34.06	10.12	32.89	9.37
	7.0	6.0	43.49	14.44	41.67	13.07	40.50	11.97	35.20	10.05	34.06	9.42	32.89	8.86
	9.0	7.9	43.99	13.64	42.63	12.46	40.50	11.09	35.20	9.33	34.06	8.91	32.89	8.34
	11.0	9.8	45.16	13.06	43.95	11.92	40.50	10.29	35.20	8.82	34.06	8.40	32.89	7.85
	13.0	11.8	46.16	12.34	43.95	10.98	40.50	9.69	35.20	8.29	34.06	7.90	32.89	7.35
15.0	13.7	47.25	11.73	43.95	10.25	40.50	9.13	35.20	7.81	34.06	7.44	32.89	6.93	
18.0	16.6	47.25	10.13	43.95	9.12	40.50	8.08	35.20	6.89	34.06	6.59	32.89	6.29	
21.0	19.5	47.25	9.41	43.95	8.35	40.50	7.29	35.20	6.26	34.06	6.05	32.89	5.75	
24.0	22.4	47.25	8.59	43.95	7.55	40.50	6.62	35.20	5.72	34.06	5.51	32.89	5.26	
27.0	25.3	47.25	7.81	43.95	6.81	40.50	6.01	35.20	5.17	34.06	4.99	32.89	4.72	
30.0	28.1	47.25	7.10	43.95	6.14	40.50	5.45	35.20	4.68	34.06	4.52	32.89	4.24	
80%	-30.0	-30.5	22.76	9.70	22.33	10.00	21.89	10.30	21.67	10.44	21.45	10.50	21.01	9.85
	-25.0	-25.4	23.49	10.11	23.14	10.43	22.80	10.75	22.63	10.91	22.42	11.01	21.32	10.46
	-19.8	-20.0	24.24	10.53	23.86	10.81	23.49	11.10	23.30	11.25	23.11	11.39	22.73	11.67
	-18.8	-19.0	24.37	10.59	23.99	10.87	23.60	11.14	23.41	11.29	23.22	11.42	22.84	11.73
	-16.7	-17.0	24.61	10.70	24.22	10.96	23.82	11.24	23.62	11.38	23.43	11.52	22.90	11.44
	-13.7	-15.0	24.84	10.87	24.43	11.13	24.03	11.40	23.83	11.54	23.63	11.67	22.90	11.07
	-11.8	-13.0	25.05	10.94	24.64	11.19	24.23	11.43	24.02	11.56	23.70	11.37	22.90	10.57
	-9.8	-11.0	25.25	11.01	24.83	11.23	24.41	11.48	24.08	11.26	23.70	10.89	22.90	10.06
	-9.5	-10.0	25.35	10.97	24.92	11.20	24.46	11.33	24.08	10.98	23.70	10.57	22.90	9.76
	-8.5	-9.1	25.43	11.00	25.00	11.23	24.46	11.10	24.08	10.72	23.70	10.33	22.90	9.53
	-7.0	-7.6	25.57	11.04	25.13	11.27	24.46	10.73	24.08	10.35	23.70	9.95	22.90	9.15
	-5.0	-5.6	25.27	10.88	24.74	10.74	24.03	10.01	23.66	9.64	23.29	9.25	22.51	8.46
	-3.0	-3.7	26.17	11.10	25.47	10.40	24.73	9.67	24.35	9.29	23.95	8.90	23.14	8.10
	0.0	-0.7	28.23	11.06	27.37	10.35	26.55	9.45	26.13	8.93	25.69	8.53	24.78	7.90
	3.0	2.2	31.53	11.35	30.46	10.53	29.49	9.38	28.99	8.83	28.48	8.52	27.39	8.06
	5.0	4.1	34.08	11.26	32.97	10.19	31.86	9.24	31.28	8.96	30.27	8.59	29.24	8.11
	7.0	6.0	38.66	11.74	37.04	10.63	36.00	9.88	34.47	9.37	32.97	8.84	29.98	7.78
	9.0	7.9	39.10	11.02	37.90	10.06	36.00	9.50	34.47	8.82	32.97	8.32	29.98	7.32
	11.0	9.8	40.14	10.49	39.02	9.80	36.00	8.82	34.47	8.32	32.97	7.88	29.98	6.89
	13.0	11.8	41.03	9.94	39.02	9.21	36.00	8.31	34.47	7.79	32.97	7.35	29.98	6.49
15.0	13.7	42.23	9.64	39.02	8.65	36.00	7.81	34.47	7.38	32.97	6.89	29.98	6.11	
18.0	16.6	42.23	8.55	39.02	7.61	36.00	6.90	34.47	6.59	32.97	6.30	29.98	5.67	
21.0	19.5	42.23	7.81	39.02	6.92	36.00	6.30	34.47	6.02	32.97	5.76	29.98	5.18	
24.0	22.4	42.23	7.00	39.02	6.30	36.00	5.76	34.47	5.50	32.97	5.21	29.98	4.69	
27.0	25.3	42.23	6.35	39.02	5.70	36.00	5.21	34.47	4.98	32.97	4.67	29.98	4.16	
30.0	28.1	42.23	5.76	39.02	5.16	36.00	4.71	34.47	4.50	32.97	4.19	29.98	3.70	

Abbreviations:  
 CR: Combination ratio  
 TC: Total capacity (kW)  
 PI: Power input (compressor + outdoor fan motor) (kW)  
 Notes:  
 Shaded cells indicate rating condition.

Table continued on next page ...

Table 2-8.17: 14HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
70%	-30.0	-30.5	20.57	9.19	20.27	9.54	19.87	9.65	19.15	9.09	18.77	8.70	18.39	8.61
	-25.0	-25.4	21.20	9.60	20.88	9.91	20.51	10.10	20.19	9.93	19.86	9.75	19.16	9.35
	-19.8	-20.0	21.77	9.99	21.42	10.25	21.07	10.52	20.90	10.66	20.73	10.78	20.04	10.18
	-18.8	-19.0	21.86	10.05	21.51	10.29	21.16	10.57	20.98	10.69	20.74	10.64	20.04	9.96
	-16.7	-17.0	22.05	10.17	21.69	10.40	21.33	10.66	21.07	10.58	20.74	10.25	20.04	9.57
	-13.7	-15.0	22.22	10.31	21.85	10.56	21.40	10.54	21.07	10.23	20.74	9.88	20.04	9.21
	-11.8	-13.0	22.39	10.39	22.01	10.62	21.40	10.09	21.07	9.77	20.74	9.42	20.04	8.74
	-9.8	-11.0	22.54	10.44	22.04	10.25	21.40	9.62	21.07	9.31	20.74	8.96	20.04	8.27
	-9.5	-10.0	22.61	10.42	22.04	9.98	21.40	9.35	21.07	9.01	20.74	8.67	20.04	8.00
	-8.5	-9.1	22.65	10.39	22.04	9.76	21.40	9.15	21.07	8.81	20.74	8.49	20.04	7.80
	-7.0	-7.6	22.65	10.03	22.04	9.41	21.40	8.78	21.07	8.44	20.74	8.11	20.04	7.47
	-5.0	-5.6	22.24	9.36	21.64	8.76	21.02	8.15	20.70	7.83	20.38	7.51	19.69	7.04
	-3.0	-3.7	22.91	9.05	22.28	8.45	21.64	7.82	21.30	7.48	20.96	7.23	20.25	6.85
	0.0	-0.7	24.64	8.92	23.95	8.15	23.23	7.47	22.86	7.30	22.48	7.10	21.68	6.72
	3.0	2.2	27.47	8.96	26.65	8.05	25.81	7.67	25.37	7.46	24.92	7.23	23.97	6.85
	5.0	4.1	29.75	8.81	28.83	8.22	27.87	7.82	27.37	7.60	26.49	7.30	25.58	6.90
	7.0	6.0	33.82	9.32	32.41	8.74	31.47	8.35	30.16	7.83	28.85	7.40	26.24	6.53
	9.0	7.9	34.21	8.89	33.16	8.39	31.47	7.79	30.16	7.39	28.85	6.93	26.24	6.17
	11.0	9.8	35.12	8.64	34.09	8.13	31.47	7.35	30.16	6.91	28.85	6.54	26.24	5.86
	13.0	11.8	35.90	8.32	34.09	7.67	31.47	6.87	30.16	6.50	28.85	6.19	26.24	5.73
15.0	13.7	36.72	8.00	34.09	7.23	31.47	6.48	30.16	6.23	28.85	5.88	26.24	5.28	
18.0	16.6	36.72	6.99	34.09	6.48	31.47	5.94	30.16	5.67	28.85	5.44	26.24	4.90	
21.0	19.5	36.72	6.42	34.09	5.91	31.47	5.47	30.16	5.17	28.85	4.95	26.24	4.45	
24.0	22.4	36.72	5.84	34.09	5.39	31.47	4.94	30.16	4.68	28.85	4.50	26.24	3.98	
27.0	25.3	36.72	5.27	34.09	4.84	31.47	4.39	30.16	4.18	28.85	3.95	26.24	3.53	
30.0	28.1	36.72	4.76	34.09	4.34	31.47	3.90	30.16	3.72	28.85	3.46	26.24	3.14	
60%	-30.0	-30.5	18.26	8.75	17.66	8.33	17.05	7.99	16.78	7.92	16.29	7.70	15.76	7.55
	-25.0	-25.4	18.73	9.11	18.29	9.02	17.76	8.69	17.48	8.54	17.19	8.35	16.59	7.99
	-19.8	-20.0	19.14	9.45	18.83	9.71	18.34	9.38	18.06	9.13	17.77	8.86	17.17	8.31
	-18.8	-19.0	19.21	9.49	18.89	9.72	18.34	9.19	18.06	8.95	17.77	8.68	17.17	8.12
	-16.7	-17.0	19.35	9.61	18.89	9.37	18.34	8.85	18.06	8.59	17.77	8.30	17.17	7.74
	-13.7	-15.0	19.42	9.54	18.89	9.04	18.34	8.52	18.06	8.25	17.77	7.98	17.17	7.40
	-11.8	-13.0	19.42	9.14	18.89	8.63	18.34	8.09	18.06	7.84	17.77	7.56	17.17	7.02
	-9.8	-11.0	19.42	8.70	18.89	8.20	18.34	7.67	18.06	7.41	17.77	7.11	17.17	6.77
	-9.5	-10.0	19.42	8.47	18.89	7.95	18.34	7.42	18.06	7.17	17.77	6.89	17.17	6.58
	-8.5	-9.1	19.42	8.28	18.89	7.76	18.34	7.24	18.06	6.97	17.77	6.77	17.17	6.50
	-7.0	-7.6	19.42	7.96	18.89	7.45	18.34	6.92	18.06	6.72	17.77	6.56	17.17	6.29
	-5.0	-5.6	19.06	7.38	18.55	6.87	18.02	6.46	17.75	6.32	17.46	6.19	16.88	5.88
	-3.0	-3.7	19.63	7.07	19.10	6.59	18.55	6.29	18.26	6.18	17.97	6.04	17.35	5.75
	0.0	-0.7	21.12	6.78	20.53	6.51	19.91	6.22	19.60	6.09	19.27	5.95	18.58	5.71
	3.0	2.2	23.54	6.97	22.85	6.67	22.12	6.37	21.74	6.21	21.36	6.05	20.54	5.87
	5.0	4.1	25.50	7.14	24.71	6.82	23.89	6.50	23.46	6.34	22.70	6.15	21.93	5.98
	7.0	6.0	28.99	7.68	27.78	7.20	26.98	6.76	25.85	6.43	24.73	6.14	22.48	5.49
	9.0	7.9	29.32	7.26	28.42	6.88	26.98	6.55	25.85	6.07	24.73	5.93	22.48	5.23
	11.0	9.8	30.10	7.00	29.22	6.61	26.98	6.06	25.85	5.78	24.73	5.49	22.48	4.94
	13.0	11.8	30.78	6.71	29.22	6.34	26.98	5.75	25.85	5.45	24.73	5.20	22.48	4.66
15.0	13.7	31.47	6.54	29.22	5.93	26.98	5.44	25.85	5.22	24.73	4.93	22.48	4.43	
18.0	16.6	31.47	5.88	29.22	5.48	26.98	4.98	25.85	4.72	24.73	4.55	22.48	4.07	
21.0	19.5	31.47	5.43	29.22	5.00	26.98	4.54	25.85	4.35	24.73	4.11	22.48	3.74	
24.0	22.4	31.47	4.91	29.22	4.51	26.98	4.19	25.85	3.92	24.73	3.76	22.48	3.30	
27.0	25.3	31.47	4.38	29.22	4.00	26.98	3.61	25.85	3.45	24.73	3.29	22.48	2.90	
30.0	28.1	31.47	3.91	29.22	3.54	26.98	3.11	25.85	3.04	24.73	2.88	22.48	2.55	

**Abbreviations:**

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

**Notes:**

Shaded cells indicate rating condition.

Table continued on next page ...

Table 2-8.17: 14HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
50%	-30.0	-30.5	15.42	7.43	15.00	7.27	14.55	7.07	14.32	6.97	14.10	6.90	13.60	6.67
	-25.0	-25.4	15.83	7.82	15.40	7.55	14.94	7.25	14.71	7.09	14.48	6.95	13.98	6.61
	-19.8	-20.0	16.18	8.20	15.74	7.80	15.29	7.41	15.05	7.19	14.81	6.97	14.31	6.53
	-18.8	-19.0	16.18	8.04	15.74	7.66	15.29	7.22	15.05	7.01	14.81	6.81	14.31	6.43
	-16.7	-17.0	16.18	7.73	15.74	7.32	15.29	6.90	15.05	6.68	14.81	6.45	14.31	6.22
	-13.7	-15.0	16.18	7.42	15.74	7.03	15.29	6.61	15.05	6.37	14.81	6.27	14.31	6.06
	-11.8	-13.0	16.18	7.05	15.74	6.64	15.29	6.27	15.05	6.16	14.81	6.04	14.31	5.82
	-9.8	-11.0	16.18	6.67	15.74	6.27	15.29	6.02	15.05	5.90	14.81	5.80	14.31	5.57
	-9.5	-10.0	16.18	6.45	15.74	6.10	15.29	5.87	15.05	5.76	14.81	5.64	14.31	5.43
	-8.5	-9.1	16.18	6.30	15.74	5.98	15.29	5.78	15.05	5.65	14.81	5.55	14.31	5.32
	-7.0	-7.6	16.18	6.02	15.74	5.80	15.29	5.59	15.05	5.47	14.81	5.37	14.31	5.17
	-5.0	-5.6	15.89	5.66	15.46	5.46	15.02	5.25	14.79	5.14	14.55	5.05	14.07	4.90
	-3.0	-3.7	16.36	5.53	15.92	5.32	15.45	5.12	15.22	5.01	14.97	4.94	14.46	4.83
	0.0	-0.7	17.60	5.45	17.11	5.24	16.59	5.06	16.33	4.99	16.06	4.93	15.49	4.81
	3.0	2.2	19.62	5.59	19.04	5.38	18.43	5.23	18.12	5.18	17.80	5.12	17.12	4.97
	5.0	4.1	21.25	5.73	20.60	5.55	19.91	5.39	19.56	5.32	18.92	5.07	18.27	4.81
	7.0	6.0	24.16	5.98	23.15	5.72	22.48	5.48	21.56	5.35	20.61	5.00	18.74	4.52
	9.0	7.9	24.44	5.72	23.68	5.51	22.48	5.20	21.56	4.97	20.61	4.76	18.74	4.28
	11.0	9.8	25.09	5.75	24.36	5.39	22.48	4.93	21.56	4.69	20.61	4.48	18.74	4.05
	13.0	11.8	25.65	5.45	24.36	5.10	22.48	4.66	21.56	4.46	20.61	4.25	18.74	3.81
15.0	13.7	26.24	5.24	24.36	4.84	22.48	4.41	21.56	4.21	20.61	4.05	18.74	3.63	
18.0	16.6	26.24	4.79	24.36	4.40	22.48	4.03	21.56	3.90	20.61	3.68	18.74	3.45	
21.0	19.5	26.24	4.35	24.36	4.00	22.48	3.66	21.56	3.52	20.61	3.34	18.74	3.01	
24.0	22.4	26.24	3.92	24.36	3.58	22.48	3.27	21.56	3.10	20.61	2.95	18.74	2.66	
27.0	25.3	26.24	3.45	24.36	3.16	22.48	2.87	21.56	2.73	20.61	2.60	18.74	2.35	
30.0	28.1	26.24	3.04	24.36	2.79	22.48	2.51	21.56	2.40	20.61	2.28	18.74	2.08	

## Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

## Notes:

Shaded cells indicate rating condition.

Table 2-8.18: 16HP heating capacity

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
130%	-30.0	-30.5	35.22	12.93	34.54	13.36	33.87	13.74	33.53	13.96	33.19	14.13	32.51	14.59
	-25.0	-25.4	35.22	13.03	34.54	13.40	33.87	13.74	33.53	13.93	33.19	14.09	32.51	14.46
	-19.8	-20.0	35.22	13.13	34.54	13.43	33.87	13.74	33.53	13.90	33.19	14.04	32.51	14.34
	-18.8	-19.0	35.22	13.14	34.54	13.42	33.87	13.72	33.53	13.86	33.19	14.00	32.51	14.31
	-16.7	-17.0	35.22	13.09	34.54	13.39	33.87	13.65	33.53	13.79	33.19	13.94	32.51	14.23
	-13.7	-15.0	35.22	13.12	34.54	13.40	34.15	13.78	33.84	13.93	33.54	14.06	32.93	14.37
	-11.8	-13.0	35.60	13.17	34.99	13.45	34.37	13.74	34.59	14.12	34.31	14.27	33.75	14.60
	-9.8	-11.0	36.44	13.37	35.86	13.68	35.29	13.99	35.00	14.15	34.71	14.30	34.13	14.62
	-9.5	-10.0	36.65	13.30	36.07	13.63	35.49	13.95	35.19	14.08	34.90	14.24	34.32	14.56
	-8.5	-9.1	36.84	13.34	36.25	13.66	35.66	13.96	35.36	14.10	35.07	14.25	34.48	14.58
	-7.0	-7.6	37.14	13.37	36.54	13.65	35.94	13.95	35.64	14.10	35.34	14.25	34.73	14.56
	-5.0	-5.6	36.90	13.15	36.29	13.45	35.69	13.73	35.38	13.87	35.08	14.02	34.47	14.31
	-3.0	-3.7	38.25	13.33	37.62	13.62	36.99	13.91	36.67	14.06	36.36	14.20	35.72	14.50
	0.0	-0.7	41.49	13.97	40.81	14.28	40.13	14.59	39.79	14.74	39.45	14.88	38.76	15.19
	3.0	2.2	46.52	15.18	45.77	15.51	45.02	15.84	44.64	16.00	44.26	16.16	43.50	16.50
	5.0	4.1	50.61	16.18	49.80	16.52	49.00	16.90	48.59	17.05	48.18	17.26	47.12	17.10
	7.0	6.0	57.93	18.15	56.81	18.48	55.70	18.80	55.14	19.00	54.59	19.15	53.47	18.53
	9.0	7.9	59.78	18.36	58.63	18.72	57.48	19.06	56.91	19.22	56.33	19.15	53.47	17.65
	11.0	9.8	61.64	18.56	60.45	18.92	59.26	19.28	58.67	19.40	58.08	18.82	54.18	16.80
	13.0	11.8	63.49	18.77	62.27	19.13	61.05	19.52	60.44	19.04	58.08	17.91	54.18	15.61
	15.0	13.7	65.34	18.97	64.09	19.35	62.83	19.19	61.62	18.51	59.60	17.50	54.18	14.53
18.0	16.6	68.12	19.29	66.81	19.46	62.83	16.98	61.62	15.97	59.60	14.80	54.18	12.20	
21.0	19.5	70.90	19.62	67.69	18.68	62.83	15.97	61.62	14.94	59.60	13.80	54.18	11.32	
24.0	22.4	72.90	19.13	67.69	17.13	62.83	14.57	61.62	13.63	59.60	12.52	54.18	10.49	
27.0	25.3	72.90	18.04	67.69	15.38	62.83	12.98	61.62	12.11	59.60	11.13	54.18	9.53	
30.0	28.1	72.90	17.01	67.69	13.80	62.83	11.56	61.62	10.75	59.60	9.90	54.18	8.66	
120%	-30.0	-30.5	33.67	12.68	33.02	13.09	32.38	13.44	32.05	13.67	31.73	13.85	31.08	14.28
	-25.0	-25.4	33.67	12.78	33.02	13.13	32.38	13.46	32.05	13.64	31.73	13.81	31.08	14.16
	-19.8	-20.0	33.67	12.88	33.02	13.18	32.38	13.47	32.05	13.61	31.73	13.77	31.08	14.05
	-18.8	-19.0	33.67	12.85	33.02	13.14	32.38	13.43	32.05	13.58	31.73	13.72	31.08	14.02
	-16.7	-17.0	33.67	12.81	33.02	13.09	32.38	13.36	32.31	13.63	32.02	13.78	31.44	14.09
	-13.7	-15.0	33.99	13.00	33.41	13.28	32.82	13.59	32.52	13.70	32.73	14.08	32.20	14.44
	-11.8	-13.0	34.75	13.18	34.21	13.49	33.67	13.80	33.40	13.97	33.12	14.14	32.58	14.46
	-9.8	-11.0	35.17	13.24	34.61	13.55	34.05	13.83	33.77	14.00	33.49	14.17	32.93	14.48
	-9.5	-10.0	35.37	13.20	34.80	13.49	34.23	13.80	33.95	13.94	33.66	14.09	33.10	14.41
	-8.5	-9.1	35.54	13.23	34.97	13.51	34.39	13.81	34.11	13.98	33.82	14.12	33.24	14.40
	-7.0	-7.6	35.82	13.23	35.23	13.55	34.65	13.83	34.36	13.97	34.07	14.11	33.48	14.40
	-5.0	-5.6	35.56	13.03	34.97	13.30	34.39	13.59	34.09	13.74	33.80	13.89	33.20	14.15
	-3.0	-3.7	36.85	13.22	36.25	13.50	35.63	13.78	35.33	13.91	35.02	14.07	34.41	14.35
	0.0	-0.7	39.98	13.89	39.32	14.18	38.66	14.47	38.33	14.61	37.99	14.79	37.27	14.94
	3.0	2.2	44.85	15.12	44.13	15.43	43.39	15.77	43.02	15.92	42.65	16.09	41.63	15.76
	5.0	4.1	48.83	16.13	48.05	16.49	47.26	16.83	46.86	17.01	46.34	16.94	45.00	16.09
	7.0	6.0	55.38	17.97	54.31	18.28	53.25	18.63	52.72	18.70	52.19	18.19	50.02	16.76
	9.0	7.9	57.15	18.18	56.05	18.56	54.95	18.85	54.40	18.46	53.85	17.91	50.02	15.67
	11.0	9.8	58.92	18.43	57.79	18.77	56.66	18.62	56.09	18.15	55.03	17.41	50.02	14.57
	13.0	11.8	60.70	18.64	59.53	19.00	58.36	18.28	56.09	17.15	55.03	16.18	50.02	13.51
	15.0	13.7	62.47	18.89	61.27	18.69	60.03	17.83	57.52	16.43	55.03	15.11	50.02	12.53
18.0	16.6	65.13	18.92	61.27	16.60	60.03	15.08	57.52	13.84	55.03	12.68	50.02	10.77	
21.0	19.5	67.29	18.50	61.27	15.57	60.03	14.09	57.52	12.82	55.03	11.70	50.02	10.00	
24.0	22.4	67.29	17.00	61.27	14.28	60.03	12.80	57.52	11.66	55.03	10.82	50.02	9.20	
27.0	25.3	67.29	15.28	61.27	12.74	60.03	11.34	57.52	10.56	55.03	9.81	50.02	8.38	
30.0	28.1	67.29	13.73	61.27	11.37	60.03	10.05	57.52	9.57	55.03	8.90	50.02	7.64	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...



Table2-8.18:16HP heating capacity(continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
110%	-30.0	-30.5	31.81	12.29	31.19	12.70	30.58	13.09	30.28	13.25	29.97	13.47	29.36	13.86
	-25.0	-25.4	31.81	12.39	31.19	12.74	30.58	13.08	30.28	13.22	29.97	13.41	29.36	13.74
	-19.8	-20.0	31.81	12.49	31.19	12.78	30.58	13.07	30.28	13.20	29.97	13.34	29.62	13.75
	-18.8	-19.0	31.81	12.48	31.19	12.75	30.58	13.04	30.53	13.27	30.26	13.45	29.72	13.75
	-16.7	-17.0	32.12	12.58	31.56	12.87	31.01	13.16	31.19	13.52	30.94	13.68	30.45	14.01
	-13.7	-15.0	32.85	12.89	32.34	13.21	31.83	13.53	31.57	13.68	31.32	13.84	30.81	14.17
	-11.8	-13.0	33.25	12.96	32.72	13.26	32.20	13.58	31.93	13.73	31.67	13.90	31.14	14.21
	-9.8	-11.0	33.62	13.03	33.08	13.34	32.54	13.60	32.27	13.74	32.00	13.93	31.46	14.22
	-9.5	-10.0	33.80	12.97	33.25	13.27	32.71	13.57	32.43	13.72	32.16	13.86	31.61	14.18
	-8.5	-9.1	33.96	13.02	33.40	13.29	32.85	13.58	32.57	13.72	32.30	13.87	31.74	14.18
	-7.0	-7.6	34.20	13.02	33.64	13.31	33.08	13.59	32.80	13.72	32.52	13.89	31.96	14.18
	-5.0	-5.6	33.92	12.83	33.35	13.11	32.79	13.37	32.51	13.51	32.22	13.66	31.66	13.94
	-3.0	-3.7	35.14	13.04	34.56	13.31	33.97	13.58	33.68	13.72	33.38	13.88	32.66	13.76
	0.0	-0.7	38.13	13.73	37.50	14.01	36.86	14.30	36.54	14.45	36.22	14.60	35.27	14.05
	3.0	2.2	42.82	14.96	42.12	15.29	41.41	15.60	40.96	15.52	40.52	15.46	39.11	14.10
	5.0	4.1	46.65	16.01	45.89	16.34	45.05	16.53	44.40	16.06	43.87	15.88	42.18	14.25
	7.0	6.0	52.83	17.81	51.90	18.16	50.77	17.80	49.80	17.19	49.29	16.73	42.18	13.28
	9.0	7.9	54.54	18.06	53.55	18.32	51.91	17.35	51.39	16.87	50.44	15.99	45.86	13.43
	11.0	9.8	56.26	18.35	55.09	18.05	53.52	17.02	52.72	16.17	50.44	14.92	45.86	12.49
	13.0	11.8	57.94	18.43	56.23	17.57	55.02	16.27	52.72	15.03	50.44	13.82	45.86	11.51
15.0	13.7	59.49	18.06	57.87	17.17	55.02	15.17	52.72	13.98	50.44	12.83	45.86	10.84	
18.0	16.6	61.52	16.50	57.87	14.47	55.02	12.71	52.72	11.66	50.44	10.96	45.86	9.55	
21.0	19.5	61.52	15.49	57.87	13.51	55.02	11.70	52.72	10.87	50.44	10.13	45.86	8.69	
24.0	22.4	61.52	14.20	57.87	12.31	55.02	10.86	52.72	10.10	50.44	9.33	45.86	7.91	
27.0	25.3	61.52	12.64	57.87	10.91	55.02	9.85	52.72	9.19	50.44	8.53	45.86	7.14	
30.0	28.1	61.52	11.25	57.87	9.67	55.02	8.94	52.72	8.37	50.44	7.79	45.86	6.45	
100%	-30.0	-30.5	31.62	12.62	31.01	13.02	30.40	13.36	30.10	13.56	29.79	13.77	29.18	14.18
	-25.0	-25.4	31.62	12.71	31.01	13.06	30.40	13.38	30.10	13.54	29.79	13.72	29.18	14.07
	-19.8	-20.0	31.62	12.80	31.01	13.09	30.40	13.39	30.10	13.52	29.79	13.67	29.45	14.09
	-18.8	-19.0	31.62	12.79	31.01	13.07	30.40	13.35	30.35	13.60	30.08	13.77	29.54	14.09
	-16.7	-17.0	31.92	12.91	31.38	13.19	30.83	13.49	31.01	13.86	30.77	14.03	30.28	14.38
	-13.7	-15.0	32.65	13.23	32.15	13.54	31.64	13.88	31.39	14.04	31.14	14.20	30.63	14.55
	-11.8	-13.0	33.05	13.31	32.53	13.62	32.01	13.93	31.75	14.10	31.49	14.23	30.97	14.59
	-9.8	-11.0	33.41	13.38	32.88	13.68	32.35	13.99	32.08	14.14	31.81	14.31	31.28	14.64
	-9.5	-10.0	33.58	13.36	33.04	13.65	32.50	13.95	32.23	14.10	31.96	14.24	31.42	14.57
	-8.5	-9.1	33.73	13.38	33.19	13.69	32.64	13.98	32.37	14.14	32.09	14.29	31.55	14.60
	-7.0	-7.6	33.97	13.41	33.42	13.70	32.86	14.02	32.59	14.16	32.31	14.31	31.60	14.22
	-5.0	-5.6	33.70	13.24	33.14	13.52	32.58	13.81	32.30	13.95	32.02	14.10	31.17	13.59
	-3.0	-3.7	34.91	13.46	34.33	13.76	33.75	14.04	33.46	14.18	33.04	13.95	32.14	13.38
	0.0	-0.7	37.88	14.20	37.25	14.49	36.62	14.80	36.14	14.52	35.69	14.29	34.42	12.97
	3.0	2.2	42.53	15.52	41.83	15.83	40.94	15.68	40.28	15.09	39.56	14.36	38.05	12.94
	5.0	4.1	46.33	16.62	45.36	16.47	44.25	15.99	43.46	15.23	42.05	14.29	40.61	12.85
	7.0	6.0	52.47	18.53	51.00	17.67	50.00	16.93	47.94	15.72	45.86	14.52	41.68	12.22
	9.0	7.9	53.66	18.13	52.63	17.41	50.02	15.84	47.94	14.68	45.86	13.51	41.68	11.33
	11.0	9.8	55.33	17.88	52.63	16.56	50.02	14.77	47.94	13.65	45.86	12.55	41.68	10.71
	13.0	11.8	56.99	17.55	54.19	15.88	50.02	13.68	47.94	12.62	45.86	11.57	41.68	10.09
15.0	13.7	58.36	17.04	54.19	14.79	50.02	12.68	47.94	11.67	45.86	10.90	41.68	9.46	
18.0	16.6	58.36	14.33	54.19	12.37	50.02	10.83	47.94	10.20	45.86	9.56	41.68	8.36	
21.0	19.5	58.36	13.28	54.19	11.37	50.02	10.09	47.94	9.44	45.86	8.77	41.68	7.58	
24.0	22.4	58.36	12.16	54.19	10.60	50.02	9.28	47.94	8.63	45.86	8.00	41.68	6.96	
27.0	25.3	58.36	10.87	54.19	9.65	50.02	8.44	47.94	7.84	45.86	7.23	41.68	6.32	
30.0	28.1	58.36	9.73	54.19	8.79	50.02	7.67	47.94	7.13	45.86	6.53	41.68	5.74	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

# MDV8 ECO VRF 50Hz



Table 2-8.18: 16HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
90%	-30.0	-30.5	28.45	11.74	27.91	12.10	27.36	12.43	27.09	12.64	26.81	12.82	26.27	12.91
	-25.0	-25.4	28.45	11.84	27.91	12.16	27.36	12.45	27.09	12.62	26.81	12.78	26.27	12.96
	-19.8	-20.0	28.83	12.10	28.77	12.59	28.34	12.92	28.11	13.08	27.90	13.26	27.46	13.60
	-18.8	-19.0	29.40	12.32	28.96	12.63	28.51	12.97	28.28	13.14	28.07	13.29	27.62	13.66
	-16.7	-17.0	29.77	12.47	29.30	12.76	28.84	13.09	28.61	13.24	28.38	13.42	27.92	13.73
	-13.7	-15.0	30.10	12.67	29.63	12.97	29.15	13.26	28.91	13.44	28.68	13.58	28.20	13.89
	-11.8	-13.0	30.41	12.74	29.93	13.04	29.44	13.34	29.20	13.48	28.95	13.66	28.41	13.81
	-9.8	-11.0	30.71	12.81	30.21	13.12	29.71	13.38	29.46	13.54	29.21	13.68	28.51	13.46
	-9.5	-10.0	30.85	12.79	30.34	13.07	29.84	13.34	29.58	13.51	29.33	13.64	28.48	13.03
	-8.5	-9.1	30.97	12.83	30.46	13.09	29.95	13.39	29.69	13.52	29.42	13.62	28.44	12.66
	-7.0	-7.6	31.16	12.88	30.65	13.13	30.13	13.41	29.87	13.56	29.45	13.26	28.47	12.27
	-5.0	-5.6	30.86	12.68	30.34	12.94	29.82	13.20	29.45	12.98	29.04	12.66	28.07	11.65
	-3.0	-3.7	31.97	12.90	31.43	13.18	30.77	13.07	30.38	12.81	29.95	12.46	28.93	11.40
	0.0	-0.7	34.70	13.63	33.99	13.55	33.19	13.19	32.67	12.65	32.12	12.08	30.98	10.97
	3.0	2.2	38.96	14.78	38.04	14.33	36.87	13.29	36.25	12.68	35.61	12.07	34.25	10.83
	5.0	4.1	42.30	15.36	41.20	14.67	39.83	13.41	39.11	12.75	37.84	11.94	36.55	10.78
	7.0	6.0	48.20	16.75	46.30	15.43	45.00	14.12	39.11	11.85	41.27	12.09	37.51	10.46
	9.0	7.9	48.88	16.11	47.37	14.73	45.03	13.15	39.11	11.02	41.27	11.25	37.51	9.80
	11.0	9.8	50.18	15.45	48.77	14.16	45.03	12.19	43.16	11.28	41.27	10.63	37.51	9.20
	13.0	11.8	51.29	14.69	48.77	13.11	45.03	11.27	43.16	10.63	41.27	9.99	37.51	8.59
15.0	13.7	52.52	13.99	48.77	12.13	45.03	10.66	43.16	10.04	41.27	9.42	37.51	8.09	
18.0	16.6	52.52	11.61	48.77	10.46	45.03	9.33	43.16	8.76	41.27	8.23	37.51	7.34	
21.0	19.5	52.52	10.84	48.77	9.68	45.03	8.51	43.16	7.99	41.27	7.48	37.51	6.74	
24.0	22.4	52.52	10.08	48.77	8.91	45.03	7.73	43.16	7.25	41.27	6.85	37.51	6.19	
27.0	25.3	52.52	9.18	48.77	8.09	45.03	7.00	43.16	6.59	41.27	6.24	37.51	5.52	
30.0	28.1	52.52	8.36	48.77	7.35	45.03	6.34	43.16	5.99	41.27	5.68	37.51	4.92	
80%	-30.0	-30.5	25.29	10.85	24.81	11.17	24.32	11.53	24.08	11.68	23.83	11.77	23.35	11.00
	-25.0	-25.4	25.56	11.08	25.13	11.39	25.08	11.91	24.90	12.09	24.68	12.21	23.57	11.63
	-19.8	-20.0	26.70	11.70	26.29	12.00	25.88	12.31	25.67	12.47	25.47	12.63	25.06	12.96
	-18.8	-19.0	26.85	11.75	26.43	12.05	26.01	12.36	25.80	12.52	25.59	12.68	25.18	13.02
	-16.7	-17.0	27.13	11.88	26.70	12.16	26.27	12.48	26.05	12.62	25.84	12.79	25.27	12.76
	-13.7	-15.0	27.39	12.07	26.95	12.36	26.51	12.65	26.29	12.80	26.07	12.95	25.36	12.56
	-11.8	-13.0	27.64	12.14	27.19	12.42	26.74	12.70	26.51	12.86	26.16	12.65	25.44	12.21
	-9.8	-11.0	27.87	12.22	27.41	12.50	26.95	12.76	26.60	12.55	26.24	12.33	25.45	11.66
	-9.5	-10.0	27.98	12.20	27.51	12.45	27.00	12.58	26.58	12.17	26.22	11.91	25.40	11.18
	-8.5	-9.1	28.08	12.23	27.61	12.48	27.01	12.35	26.58	11.92	26.18	11.57	25.34	10.80
	-7.0	-7.6	28.23	12.28	27.75	12.52	27.03	12.02	26.60	11.53	26.21	11.20	25.36	10.39
	-5.0	-5.6	27.92	12.11	27.34	11.99	26.63	11.45	26.21	10.98	25.82	10.61	24.98	9.80
	-3.0	-3.7	28.92	12.35	28.22	11.87	27.47	11.27	27.03	10.75	26.62	10.38	25.72	9.46
	0.0	-0.7	31.28	12.70	30.42	11.85	29.51	10.95	29.04	10.46	28.55	9.97	27.54	9.05
	3.0	2.2	34.88	12.90	33.85	11.92	32.78	10.91	32.22	10.40	31.64	9.87	30.44	9.22
	5.0	4.1	37.79	13.07	36.62	12.03	35.40	10.95	34.77	10.39	33.64	9.89	32.49	9.30
	7.0	6.0	42.96	13.91	41.16	12.59	40.00	11.46	38.36	10.80	36.68	10.21	32.49	8.64
	9.0	7.9	43.45	13.11	42.11	11.95	40.02	10.80	38.36	10.13	36.68	9.45	32.49	7.96
	11.0	9.8	44.60	12.49	43.34	11.38	40.02	10.21	38.36	9.66	36.68	8.94	32.49	7.50
	13.0	11.8	45.59	11.80	43.34	10.71	40.02	9.64	38.36	9.06	36.68	8.31	32.49	7.04
15.0	13.7	46.69	11.21	43.34	10.10	40.02	9.03	38.36	8.44	36.68	7.71	32.49	6.68	
18.0	16.6	46.69	9.81	43.34	8.84	40.02	7.90	38.36	7.51	36.68	7.15	32.49	6.16	
21.0	19.5	46.69	9.01	43.34	8.09	40.02	7.24	38.36	6.88	36.68	6.58	32.49	5.75	
24.0	22.4	46.69	8.21	43.34	7.33	40.02	6.60	38.36	6.31	36.68	6.02	32.49	5.21	
27.0	25.3	46.69	7.39	43.34	6.66	40.02	6.02	38.36	5.67	36.68	5.43	32.49	4.61	
30.0	28.1	46.69	6.65	43.34	6.05	40.02	5.49	38.36	5.09	36.68	4.91	32.49	4.08	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

**Table 2-8.18: 16HP heating capacity (continued)**

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
70%	-30.0	-30.5	22.37	10.09	22.00	10.41	21.57	10.56	21.07	10.05	20.85	9.73	20.43	9.69
	-25.0	-25.4	23.35	10.67	23.01	10.99	22.60	11.21	22.24	11.01	21.86	10.81	21.08	10.38
	-19.8	-20.0	24.00	11.11	23.63	11.39	23.25	11.68	23.06	11.84	22.87	11.98	22.10	11.29
	-18.8	-19.0	24.11	11.16	23.73	11.46	23.35	11.75	23.16	11.88	22.88	11.81	22.10	11.06
	-16.7	-17.0	24.33	11.29	23.94	11.56	23.54	11.84	23.26	11.74	22.96	11.59	22.16	10.78
	-13.7	-15.0	24.53	11.48	24.13	11.74	23.63	11.70	23.33	11.56	23.03	11.42	22.22	10.52
	-11.8	-13.0	24.72	11.54	24.31	11.81	23.69	11.39	23.40	11.25	23.04	10.93	22.26	10.14
	-9.8	-11.0	24.90	11.62	24.38	11.53	23.76	11.09	23.42	10.80	23.04	10.40	22.27	9.61
	-9.5	-10.0	24.98	11.58	24.37	11.18	23.74	10.71	23.39	10.39	23.01	9.99	22.23	9.18
	-8.5	-9.1	25.03	11.53	24.34	10.85	23.70	10.37	23.35	10.05	22.96	9.63	22.16	8.80
	-7.0	-7.6	25.07	11.27	24.36	10.53	23.72	10.01	23.36	9.67	22.96	9.24	22.15	8.36
	-5.0	-5.6	24.68	10.77	23.99	10.00	23.35	9.48	23.00	9.12	22.61	8.67	21.80	7.92
	-3.0	-3.7	25.46	10.59	24.74	9.82	24.05	9.15	23.67	8.77	23.29	8.37	22.41	7.74
	0.0	-0.7	27.39	10.31	26.62	9.56	25.82	8.77	25.41	8.40	24.98	8.17	24.09	7.73
	3.0	2.2	30.53	10.33	29.62	9.52	28.68	8.82	28.19	8.57	27.69	8.34	26.63	7.87
	5.0	4.1	33.07	10.42	32.05	9.53	30.97	9.01	30.40	8.74	29.43	8.39	28.43	7.90
	7.0	6.0	37.59	10.97	36.01	10.13	35.00	9.61	30.40	8.11	29.43	7.67	28.43	7.12
	9.0	7.9	38.02	10.34	36.84	9.68	35.00	8.80	30.40	7.46	29.43	7.11	28.43	6.72
	11.0	9.8	38.73	9.93	36.84	9.25	35.00	8.24	30.40	7.01	29.43	6.72	28.43	6.39
	13.0	11.8	39.89	9.63	36.84	8.64	35.00	7.69	30.40	6.57	29.43	6.35	28.43	6.14
15.0	13.7	39.89	9.05	36.84	8.05	35.00	7.24	30.40	6.29	29.43	6.03	28.43	5.76	
18.0	16.6	39.89	7.91	36.84	7.16	35.00	6.70	30.40	5.77	29.43	5.53	28.43	5.30	
21.0	19.5	39.89	7.21	36.84	6.59	35.00	6.18	30.40	5.35	29.43	5.09	28.43	4.84	
24.0	22.4	39.89	6.60	36.84	6.04	35.00	5.73	30.40	4.87	29.43	4.65	28.43	4.39	
27.0	25.3	39.89	6.02	36.84	5.39	35.00	5.07	30.40	4.33	29.43	4.17	28.43	3.92	
30.0	28.1	39.89	5.49	36.84	4.81	35.00	4.49	30.40	3.85	29.43	3.74	28.43	3.50	
60%	-30.0	-30.5	20.12	9.68	19.44	9.21	18.50	8.74	18.25	8.67	17.88	8.53	17.51	8.46
	-25.0	-25.4	20.66	10.11	20.18	10.00	19.57	9.66	19.26	9.47	18.94	9.27	18.27	8.85
	-19.8	-20.0	21.14	10.51	20.80	10.78	20.25	10.43	19.94	10.15	19.61	9.85	18.94	9.21
	-18.8	-19.0	21.22	10.56	20.87	10.82	20.25	10.23	19.94	9.93	19.62	9.64	18.94	9.01
	-16.7	-17.0	21.38	10.69	20.93	10.64	20.31	9.99	19.98	9.65	19.66	9.36	18.97	8.67
	-13.7	-15.0	21.45	10.59	20.99	10.48	20.36	9.79	20.03	9.44	19.71	9.12	19.01	8.38
	-11.8	-13.0	21.51	10.37	20.99	10.02	20.39	9.42	20.07	9.10	19.75	8.77	19.04	7.97
	-9.8	-11.0	21.57	10.10	20.99	9.55	20.38	8.94	20.07	8.63	19.75	8.28	19.06	7.69
	-9.5	-10.0	21.55	9.76	20.97	9.21	20.35	8.56	20.03	8.21	19.69	7.84	18.97	7.37
	-8.5	-9.1	21.52	9.44	20.94	8.88	20.30	8.20	19.97	7.83	19.62	7.52	18.94	7.21
	-7.0	-7.6	21.54	9.13	20.95	8.53	20.30	7.82	19.96	7.48	19.62	7.29	18.94	6.96
	-5.0	-5.6	21.18	8.64	20.61	8.04	19.97	7.32	19.63	7.08	19.30	6.91	18.63	6.57
	-3.0	-3.7	21.82	8.30	21.22	7.71	20.56	7.16	20.19	6.91	19.84	6.71	19.14	6.38
	0.0	-0.7	23.47	7.98	22.81	7.50	22.13	7.15	21.76	6.96	21.36	6.74	20.52	6.34
	3.0	2.2	26.16	8.03	25.39	7.68	24.58	7.31	24.16	7.13	23.73	6.96	22.36	6.43
	5.0	4.1	28.33	8.25	27.44	7.81	26.47	7.37	26.03	7.21	25.17	6.91	24.36	6.68
	7.0	6.0	32.19	8.84	30.60	8.05	30.00	7.57	26.03	6.50	25.17	6.29	24.36	6.01
	9.0	7.9	32.20	8.04	31.58	7.67	30.00	7.22	26.03	6.16	25.17	5.97	24.36	5.68
	11.0	9.8	33.20	7.80	31.58	7.19	30.00	6.78	26.03	5.84	25.17	5.63	24.36	5.38
	13.0	11.8	34.20	7.47	31.58	6.84	30.00	6.42	26.03	5.51	25.17	5.31	24.36	5.08
15.0	13.7	34.20	7.12	31.58	6.43	30.00	6.06	26.03	5.27	25.17	5.04	24.36	4.82	
18.0	16.6	34.20	6.54	31.58	5.99	30.00	5.58	26.03	4.83	25.17	4.62	24.36	4.43	
21.0	19.5	34.20	6.01	31.58	5.44	30.00	5.13	26.03	4.42	25.17	4.27	24.36	4.06	
24.0	22.4	34.20	5.57	31.58	5.04	30.00	4.68	26.03	4.01	25.17	3.88	24.36	3.66	
27.0	25.3	34.20	4.90	31.58	4.45	30.00	4.17	26.03	3.55	25.17	3.42	24.36	3.22	
30.0	28.1	34.20	4.31	31.58	3.92	30.00	3.71	26.03	3.14	25.17	3.00	24.36	2.84	

**Abbreviations:**

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

**Notes:**

Shaded cells indicate rating condition.

*Table continued on next page ...*

Table 2-8.18: 16HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
50%	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
	-30.0	-30.5	17.00	8.22	16.53	8.07	16.02	7.85	15.77	7.72	15.51	7.63	14.78	7.27
	-25.0	-25.4	17.47	8.68	16.99	8.38	16.48	8.05	16.22	7.86	15.96	7.69	15.40	7.31
	-19.8	-20.0	17.88	9.12	17.39	8.67	16.88	8.22	16.62	7.98	16.35	7.73	15.78	7.24
	-18.8	-19.0	17.88	8.94	17.39	8.51	16.88	8.02	16.61	7.78	16.35	7.55	15.78	7.14
	-16.7	-17.0	17.92	8.71	17.42	8.22	16.92	7.76	16.63	7.45	16.36	7.19	15.78	6.91
	-13.7	-15.0	17.96	8.53	17.45	8.01	16.94	7.50	16.66	7.17	16.36	6.98	15.78	6.72
	-11.8	-13.0	17.98	8.21	17.48	7.70	16.97	7.17	16.66	6.91	16.36	6.73	15.80	6.46
	-9.8	-11.0	17.98	7.80	17.49	7.31	16.98	6.87	16.67	6.64	16.37	6.47	15.80	6.20
	-9.5	-10.0	17.94	7.39	17.45	6.92	16.92	6.61	16.61	6.39	16.35	6.25	15.79	6.02
	-8.5	-9.1	17.90	7.07	17.40	6.67	16.88	6.40	16.62	6.28	16.35	6.15	15.78	5.90
	-7.0	-7.6	17.90	6.72	17.39	6.45	16.88	6.20	16.62	6.07	16.35	5.96	15.78	5.71
	-5.0	-5.6	17.59	6.37	17.10	6.10	16.58	5.82	16.33	5.72	16.07	5.60	15.52	5.45
	-3.0	-3.7	18.12	6.23	17.60	5.94	17.06	5.67	16.80	5.57	16.52	5.47	15.95	5.34
	0.0	-0.7	19.56	6.28	18.97	5.96	18.38	5.69	18.03	5.55	17.71	5.47	17.06	5.32
	3.0	2.2	21.80	6.44	21.16	6.17	20.41	5.89	19.97	5.73	19.60	5.65	18.60	5.42
	5.0	4.1	23.56	6.53	22.80	6.26	21.91	5.98	21.23	5.81	20.92	5.63	18.60	4.91
	7.0	6.0	26.29	6.55	25.50	6.32	24.29	5.97	23.29	5.73	20.92	5.08	19.02	4.59
	9.0	7.9	26.83	6.32	26.32	6.14	24.29	5.64	23.29	5.39	20.92	4.83	19.02	4.36
	11.0	9.8	27.66	6.28	26.32	5.85	24.29	5.34	23.29	5.11	20.92	4.56	19.02	4.15
13.0	11.8	28.50	6.07	26.32	5.53	24.29	5.06	23.29	4.84	20.92	4.33	19.02	3.90	
15.0	13.7	28.50	5.72	26.32	5.24	24.29	4.78	23.29	4.57	20.92	4.12	19.02	3.69	
18.0	16.6	28.50	5.27	26.32	4.79	24.29	4.37	23.29	4.22	20.92	3.76	19.02	3.38	
21.0	19.5	28.50	4.81	26.32	4.45	24.29	4.03	23.29	3.81	20.92	3.42	19.02	3.07	
24.0	22.4	28.50	4.41	26.32	4.01	24.29	3.62	23.29	3.50	20.92	3.07	19.02	2.74	
27.0	25.3	28.50	3.86	26.32	3.55	24.29	3.17	23.29	3.03	20.92	2.70	19.02	2.40	
30.0	28.1	28.50	3.37	26.32	3.15	24.29	2.77	23.29	2.63	20.92	2.37	19.02	2.09	

Abbreviations:  
 CR: Combination ratio  
 TC: Total capacity (kW)  
 PI: Power input (compressor + outdoor fan motor) (kW)  
 Notes:  
 Shaded cells indicate rating condition.

Table2-8.19:18HP heating capacity

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
130%	-30.0	-30.5	39.45	13.51	38.69	13.98	37.93	14.37	37.55	14.60	37.17	14.80	36.41	15.22
	-25.0	-25.4	39.45	13.66	38.69	14.05	37.93	14.41	37.55	14.59	37.17	14.77	36.41	15.14
	-19.8	-20.0	39.45	13.81	38.69	14.13	37.93	14.44	37.55	14.58	37.17	14.73	36.41	15.05
	-18.8	-19.0	39.45	13.78	38.69	14.09	37.93	14.39	37.55	14.56	37.17	14.68	36.41	15.00
	-16.7	-17.0	39.45	13.74	38.69	14.06	37.93	14.36	37.55	14.48	37.17	14.64	36.41	14.91
	-13.7	-15.0	39.45	13.79	38.69	14.07	38.26	14.49	37.92	14.64	37.58	14.80	36.91	15.10
	-11.8	-13.0	39.88	13.82	39.20	14.14	39.09	14.67	38.79	14.84	38.47	15.02	37.86	15.34
	-9.8	-11.0	40.83	14.04	40.19	14.37	39.56	14.70	39.24	14.85	38.92	15.03	38.28	15.37
	-9.5	-10.0	41.07	13.96	40.43	14.31	39.78	14.63	39.46	14.80	39.14	14.99	38.49	15.30
	-8.5	-9.1	41.28	14.01	40.63	14.32	39.98	14.66	39.65	14.82	39.32	14.98	38.66	15.31
	-7.0	-7.6	41.62	14.02	40.96	14.33	40.29	14.67	39.96	14.80	39.62	14.98	38.95	15.30
	-5.0	-5.6	41.35	13.77	40.68	14.09	40.01	14.40	39.67	14.54	39.33	14.70	38.65	15.02
	-3.0	-3.7	42.87	13.95	42.17	14.27	41.47	14.58	41.12	14.72	40.76	14.88	40.06	15.20
	0.0	-0.7	46.51	14.57	45.76	14.90	45.00	15.22	44.62	15.40	44.24	15.57	43.47	15.88
	3.0	2.2	52.19	15.77	51.35	16.13	50.51	16.49	50.09	16.69	49.67	16.87	48.82	17.22
	5.0	4.1	56.79	16.79	55.89	17.18	54.99	17.59	54.54	17.78	54.09	17.97	53.17	18.35
	7.0	6.0	64.88	18.76	63.63	19.15	62.38	19.51	61.76	19.71	61.14	19.88	59.89	19.75
	9.0	7.9	66.96	18.96	65.67	19.36	64.38	19.73	63.74	19.92	63.09	20.09	60.68	19.09
	11.0	9.8	69.03	19.14	67.70	19.53	66.38	19.92	65.71	20.13	65.05	19.90	60.68	18.16
	13.0	11.8	71.11	19.29	69.74	19.70	68.37	20.08	67.69	20.05	66.75	19.44	60.68	16.99
	15.0	13.7	73.18	19.46	71.78	19.88	70.37	20.19	69.67	19.72	66.75	18.49	60.68	15.89
18.0	16.6	76.30	19.94	74.83	20.37	72.81	19.08	69.76	17.64	66.75	16.21	60.68	13.54	
21.0	19.5	79.41	20.19	77.89	20.04	72.81	17.94	69.76	16.47	66.75	15.12	60.68	12.45	
24.0	22.4	82.53	20.24	78.87	19.16	72.81	16.45	69.76	15.16	66.75	13.84	60.68	11.40	
27.0	25.3	84.94	19.70	78.87	17.41	72.81	14.79	69.76	13.54	66.75	12.35	60.68	10.38	
30.0	28.1	84.94	18.63	78.87	15.83	72.81	13.29	69.76	12.09	66.75	11.02	60.68	9.46	
120%	-30.0	-30.5	37.71	13.34	36.99	13.68	36.26	14.07	35.90	14.29	35.54	14.44	34.81	14.93
	-25.0	-25.4	37.71	13.41	36.99	13.75	36.26	14.10	35.90	14.27	35.54	14.44	34.81	14.81
	-19.8	-20.0	37.71	13.49	36.99	13.83	36.26	14.13	35.90	14.26	35.54	14.44	34.81	14.70
	-18.8	-19.0	37.71	13.51	36.99	13.80	36.26	14.09	35.90	14.23	35.54	14.38	34.81	14.68
	-16.7	-17.0	37.71	13.46	36.99	13.75	36.26	14.03	36.21	14.29	35.89	14.45	35.24	14.77
	-13.7	-15.0	38.08	13.61	37.43	13.93	36.77	14.25	36.99	14.63	36.70	14.78	36.12	15.13
	-11.8	-13.0	38.94	13.82	38.34	14.16	37.74	14.49	37.44	14.66	37.14	14.82	36.54	15.17
	-9.8	-11.0	39.41	13.88	38.79	14.20	38.17	14.54	37.87	14.68	37.55	14.86	36.93	15.20
	-9.5	-10.0	39.63	13.83	39.01	14.14	38.38	14.46	38.07	14.64	37.75	14.80	37.12	15.11
	-8.5	-9.1	39.83	13.85	39.19	14.16	38.56	14.50	38.24	14.66	37.92	14.81	37.28	15.13
	-7.0	-7.6	40.14	13.86	39.50	14.18	38.85	14.50	38.52	14.66	38.20	14.80	37.55	15.12
	-5.0	-5.6	39.85	13.63	39.20	13.94	38.55	14.23	38.22	14.38	37.89	14.53	37.23	14.84
	-3.0	-3.7	41.31	13.81	40.64	14.11	39.95	14.42	39.61	14.57	39.27	14.73	38.59	15.03
	0.0	-0.7	44.83	14.46	44.10	14.78	43.37	15.10	43.00	15.27	42.62	15.42	41.88	15.74
	3.0	2.2	50.32	15.70	49.51	16.06	48.69	16.42	48.28	16.59	47.87	16.76	46.69	16.58
	5.0	4.1	54.79	16.72	53.92	17.12	53.04	17.51	52.60	17.69	52.16	17.88	50.40	17.08
	7.0	6.0	62.03	18.56	60.83	18.93	60.13	19.44	59.59	19.63	58.90	19.40	56.00	18.08
	9.0	7.9	64.01	18.78	62.78	19.15	62.09	19.69	61.43	19.60	60.32	18.97	56.00	16.99
	11.0	9.8	66.00	18.98	64.73	19.35	63.99	19.75	62.82	19.09	61.60	18.44	56.00	15.91
	13.0	11.8	67.98	19.15	67.22	19.68	65.37	19.28	64.40	18.60	61.60	17.51	56.00	14.82
	15.0	13.7	69.96	19.34	69.21	19.89	67.20	18.89	64.40	17.68	61.60	16.43	56.00	13.79
18.0	16.6	73.55	20.00	71.54	18.78	67.20	16.49	64.40	15.23	61.60	14.00	56.00	11.69	
21.0	19.5	75.92	19.56	72.81	18.04	67.20	15.40	64.40	14.10	61.60	12.91	56.00	10.81	
24.0	22.4	78.40	19.08	72.81	16.51	67.20	14.12	64.40	12.93	61.60	11.81	56.00	9.96	
27.0	25.3	78.40	17.21	72.81	14.82	67.20	12.59	64.40	11.50	61.60	10.66	56.00	9.12	
30.0	28.1	78.40	15.53	72.81	13.30	67.20	11.23	64.40	10.23	61.60	9.63	56.00	8.35	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

# MDV8 ECO VRF 50Hz



Table 2-8.19: 18HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
110%	-30.0	-30.5	35.62	12.86	34.94	13.29	34.25	13.71	33.91	13.86	33.57	14.01	32.88	14.45
	-25.0	-25.4	35.62	12.98	34.94	13.33	34.25	13.69	33.91	13.84	33.57	13.99	32.88	14.35
	-19.8	-20.0	35.62	13.10	34.94	13.37	34.25	13.67	33.91	13.83	33.57	13.97	33.20	14.39
	-18.8	-19.0	35.62	13.11	34.94	13.36	34.52	13.76	34.21	13.92	33.91	14.06	33.31	14.39
	-16.7	-17.0	35.98	13.19	35.36	13.48	34.75	13.79	34.97	14.17	34.70	14.34	34.15	14.68
	-13.7	-15.0	36.81	13.52	36.25	13.85	35.68	14.20	35.40	14.35	35.12	14.52	34.55	14.85
	-11.8	-13.0	37.26	13.60	36.68	13.92	36.10	14.23	35.80	14.40	35.51	14.55	34.92	14.89
	-9.8	-11.0	37.68	13.65	37.08	13.95	36.48	14.27	36.18	14.44	35.88	14.58	35.28	14.91
	-9.5	-10.0	37.88	13.60	37.27	13.91	36.67	14.22	36.36	14.36	36.06	14.52	35.45	14.83
	-8.5	-9.1	38.05	13.61	37.44	13.91	36.83	14.22	36.52	14.39	36.21	14.54	35.60	14.86
	-7.0	-7.6	38.34	13.63	37.71	13.93	37.09	14.23	36.77	14.39	36.46	14.53	35.83	14.85
	-5.0	-5.6	38.03	13.40	37.40	13.68	36.77	13.97	36.46	14.13	36.14	14.28	35.51	14.56
	-3.0	-3.7	39.41	13.60	38.76	13.89	38.10	14.18	37.78	14.33	37.45	14.47	36.79	14.76
	0.0	-0.7	42.77	14.27	42.06	14.59	41.35	14.90	41.00	15.04	40.64	15.20	39.50	15.00
	3.0	2.2	48.04	15.53	47.26	15.88	46.47	16.22	46.07	16.39	45.45	16.09	43.81	15.28
	5.0	4.1	52.35	16.59	51.51	16.97	50.66	17.33	50.03	17.11	49.13	16.60	47.25	15.46
	7.0	6.0	59.24	18.40	58.21	18.79	57.06	18.84	56.24	18.35	55.21	17.76	51.33	15.75
	9.0	7.9	61.17	18.66	60.10	19.04	58.63	18.51	57.56	17.90	56.46	17.29	51.33	14.71
	11.0	9.8	63.10	18.88	61.91	19.01	59.94	18.02	59.04	17.47	56.46	16.24	51.33	13.71
	13.0	11.8	65.05	19.11	63.51	18.66	61.60	17.60	59.04	16.35	56.46	15.12	51.33	12.70
15.0	13.7	66.89	19.03	64.82	18.12	61.60	16.47	59.04	15.27	56.46	14.07	51.33	11.77	
18.0	16.6	68.90	17.88	66.75	16.31	61.60	14.02	59.04	12.93	56.46	11.86	51.33	10.33	
21.0	19.5	71.71	17.48	66.75	15.20	61.60	13.03	59.04	11.89	56.46	11.01	51.33	9.53	
24.0	22.4	71.87	16.13	66.75	13.94	61.60	11.89	59.04	10.97	56.46	10.20	51.33	8.71	
27.0	25.3	71.87	14.47	66.75	12.39	61.60	10.66	59.04	9.98	56.46	9.32	51.33	7.87	
30.0	28.1	71.87	12.98	66.75	11.02	61.60	9.56	59.04	9.09	56.46	8.52	51.33	7.11	
100%	-30.0	-30.5	35.41	13.21	34.73	13.58	34.05	13.96	33.71	14.17	33.37	14.37	32.69	14.75
	-25.0	-25.4	35.41	13.31	34.73	13.63	34.05	13.97	33.71	14.16	33.37	14.33	32.69	14.66
	-19.8	-20.0	35.41	13.40	34.73	13.69	34.05	13.98	33.71	14.14	33.37	14.28	33.01	14.71
	-18.8	-19.0	35.41	13.39	34.73	13.69	34.31	14.07	34.01	14.22	33.71	14.41	33.12	14.73
	-16.7	-17.0	35.76	13.49	35.15	13.80	34.55	14.12	34.77	14.50	34.50	14.68	33.96	15.03
	-13.7	-15.0	36.59	13.85	36.04	14.18	35.47	14.53	35.20	14.68	34.92	14.87	34.36	15.23
	-11.8	-13.0	37.04	13.93	36.46	14.26	35.89	14.58	35.60	14.74	35.31	14.92	34.73	15.26
	-9.8	-11.0	37.46	13.98	36.87	14.31	36.27	14.64	35.98	14.80	35.67	14.96	35.08	15.28
	-9.5	-10.0	37.66	13.94	37.06	14.26	36.46	14.59	36.15	14.73	35.85	14.91	35.25	15.23
	-8.5	-9.1	37.83	13.97	37.22	14.28	36.61	14.60	36.31	14.76	36.01	14.90	35.39	15.24
	-7.0	-7.6	38.10	14.01	37.48	14.31	36.86	14.61	36.56	14.78	36.25	14.94	35.62	15.25
	-5.0	-5.6	37.79	13.80	37.16	14.10	36.54	14.40	36.23	14.53	35.92	14.70	35.01	14.56
	-3.0	-3.7	39.16	14.01	38.51	14.33	37.86	14.61	37.53	14.78	37.21	14.92	36.00	14.30
	0.0	-0.7	42.49	14.76	41.79	15.07	41.08	15.38	40.65	15.34	39.97	15.18	38.55	14.04
	3.0	2.2	47.72	16.08	46.94	16.42	45.89	16.25	45.11	16.12	44.30	15.52	42.62	14.08
	5.0	4.1	52.00	17.19	51.16	17.57	49.56	16.77	48.67	16.46	47.09	15.49	45.48	14.04
	7.0	6.0	58.85	19.12	57.62	18.94	56.00	18.06	53.66	17.01	51.33	15.81	46.66	13.45
	9.0	7.9	60.77	19.40	58.95	18.47	56.00	17.15	53.66	15.96	51.33	14.76	46.66	12.53
	11.0	9.8	62.45	19.06	60.68	18.12	56.00	16.03	53.66	14.88	51.33	13.78	46.66	11.61
	13.0	11.8	63.83	18.56	60.68	17.19	56.00	14.92	53.66	13.84	51.33	12.75	46.66	10.88
15.0	13.7	65.34	18.10	60.68	16.07	56.00	13.91	53.66	12.86	51.33	11.82	46.66	10.26	
18.0	16.6	65.34	15.66	60.68	13.66	56.00	11.73	53.66	11.01	51.33	10.34	46.66	9.04	
21.0	19.5	65.34	14.63	60.68	12.63	56.00	10.84	53.66	10.20	51.33	9.52	46.66	8.17	
24.0	22.4	65.34	13.39	60.68	11.51	56.00	10.04	53.66	9.36	51.33	8.67	46.66	7.35	
27.0	25.3	65.34	11.90	60.68	10.44	56.00	9.19	53.66	8.51	51.33	7.84	46.66	6.67	
30.0	28.1	65.34	10.58	60.68	9.46	56.00	8.41	53.66	7.73	51.33	7.09	46.66	6.05	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

Table 2-8.19: 18HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
90%	-30.0	-30.5	31.87	12.26	31.26	12.59	30.64	12.95	30.34	13.15	30.03	13.38	29.42	13.70
	-25.0	-25.4	31.87	12.37	31.26	12.66	30.64	12.98	30.34	13.15	30.03	13.33	29.42	13.63
	-19.8	-20.0	32.30	12.64	32.25	13.14	31.76	13.49	31.52	13.67	31.28	13.83	30.80	14.19
	-18.8	-19.0	32.95	12.87	32.46	13.20	31.96	13.57	31.71	13.73	31.47	13.90	30.97	14.24
	-16.7	-17.0	33.36	13.01	32.85	13.35	32.34	13.66	32.08	13.83	31.82	14.00	31.31	14.34
	-13.7	-15.0	33.75	13.23	33.22	13.54	32.69	13.85	32.43	14.01	32.16	14.18	31.63	14.51
	-11.8	-13.0	34.10	13.30	33.56	13.60	33.02	13.91	32.75	14.07	32.48	14.23	31.93	14.53
	-9.8	-11.0	34.43	13.36	33.88	13.67	33.32	13.96	33.04	14.12	32.77	14.26	32.06	14.23
	-9.5	-10.0	34.59	13.32	34.03	13.61	33.47	13.92	33.19	14.05	32.90	14.22	32.06	13.86
	-8.5	-9.1	34.73	13.36	34.16	13.65	33.59	13.93	33.31	14.10	33.02	14.25	32.06	13.61
	-7.0	-7.6	34.95	13.38	34.37	13.67	33.80	13.97	33.51	14.11	33.18	14.18	32.06	13.20
	-5.0	-5.6	34.61	13.18	34.03	13.46	33.45	13.75	33.13	13.80	32.61	13.53	31.51	12.50
	-3.0	-3.7	35.86	13.41	35.26	13.69	34.62	13.89	34.09	13.60	33.54	13.30	32.40	12.23
	0.0	-0.7	38.93	14.14	38.27	14.44	37.18	14.13	36.58	13.63	35.97	13.07	34.70	11.92
	3.0	2.2	43.79	15.48	42.66	15.27	41.30	14.33	40.60	13.74	39.87	13.14	38.36	11.86
	5.0	4.1	47.62	16.24	46.15	15.76	44.61	14.54	43.81	13.90	42.38	13.06	40.93	11.79
	7.0	6.0	54.13	17.60	51.86	16.68	50.40	15.38	48.30	14.31	46.20	13.27	42.00	11.26
	9.0	7.9	54.74	16.96	53.05	15.97	50.40	14.35	48.30	13.33	46.20	12.31	42.00	10.54
	11.0	9.8	56.20	16.59	54.62	15.38	50.40	13.37	48.30	12.38	46.20	11.42	42.00	9.97
	13.0	11.8	57.45	15.90	54.62	14.31	50.40	12.35	48.30	11.45	46.20	10.74	42.00	9.42
	15.0	13.7	58.81	15.20	54.62	13.30	50.40	11.45	48.30	10.74	46.20	10.12	42.00	8.75
18.0	16.6	58.81	12.83	54.62	11.28	50.40	10.08	48.30	9.49	46.20	8.93	42.00	7.80	
21.0	19.5	58.81	11.78	54.62	10.42	50.40	9.21	48.30	8.65	46.20	8.11	42.00	7.11	
24.0	22.4	58.81	10.90	54.62	9.60	50.40	8.39	48.30	7.84	46.20	7.31	42.00	6.48	
27.0	25.3	58.81	9.90	54.62	8.75	50.40	7.53	48.30	7.02	46.20	6.59	42.00	5.86	
30.0	28.1	58.81	9.00	54.62	7.97	50.40	6.77	48.30	6.28	46.20	5.94	42.00	5.29	
80%	-30.0	-30.5	28.33	11.30	27.78	11.67	27.24	11.98	26.97	12.16	26.69	12.30	26.15	12.21
	-25.0	-25.4	28.63	11.53	28.15	11.87	28.11	12.39	27.91	12.58	27.71	12.76	27.08	12.80
	-19.8	-20.0	29.93	12.17	29.47	12.47	29.02	12.82	28.79	12.97	28.56	13.14	28.11	13.45
	-18.8	-19.0	30.10	12.23	29.64	12.56	29.17	12.87	28.94	13.01	28.71	13.18	28.24	13.50
	-16.7	-17.0	30.42	12.37	29.94	12.67	29.46	12.97	29.22	13.13	28.98	13.29	28.50	13.59
	-13.7	-15.0	30.71	12.56	30.22	12.84	29.73	13.16	29.49	13.31	29.24	13.45	28.50	13.36
	-11.8	-13.0	30.99	12.64	30.49	12.93	29.99	13.22	29.74	13.36	29.48	13.50	28.50	12.98
	-9.8	-11.0	31.25	12.72	30.74	12.97	30.23	13.25	29.97	13.41	29.50	13.15	28.50	12.49
	-9.5	-10.0	31.38	12.67	30.86	12.94	30.34	13.22	29.98	13.08	29.50	12.76	28.50	12.06
	-8.5	-9.1	31.48	12.69	30.96	12.97	30.44	13.25	29.98	12.85	29.50	12.42	28.50	11.69
	-7.0	-7.6	31.66	12.73	31.13	13.01	30.44	12.90	29.98	12.51	29.50	12.01	28.50	11.27
	-5.0	-5.6	31.31	12.55	30.78	12.82	29.90	12.30	29.45	11.89	28.98	11.40	28.01	10.63
	-3.0	-3.7	32.43	12.78	31.70	12.65	30.78	12.09	30.30	11.65	29.81	11.14	28.80	10.31
	0.0	-0.7	35.05	13.12	34.07	12.73	33.05	11.82	32.52	11.36	31.98	10.86	30.84	9.89
	3.0	2.2	39.07	13.84	37.92	12.87	36.71	11.88	36.09	11.37	35.44	10.85	34.10	9.88
	5.0	4.1	42.32	14.12	41.02	13.07	39.65	11.97	38.94	11.42	37.67	10.71	36.38	9.99
	7.0	6.0	48.11	15.04	46.10	13.69	44.80	12.59	42.95	11.69	41.06	10.96	37.35	9.60
	9.0	7.9	48.66	14.22	47.16	13.07	44.80	11.69	42.95	10.92	41.06	10.26	37.35	8.88
	11.0	9.8	49.96	13.62	48.55	12.53	44.80	10.97	42.95	10.34	41.06	9.68	37.35	8.31
	13.0	11.8	51.06	12.92	48.55	11.54	44.80	10.30	42.95	9.73	41.06	9.05	37.35	7.76
	15.0	13.7	52.26	12.25	48.55	10.81	44.80	9.68	42.95	9.09	41.06	8.48	37.35	7.33
18.0	16.6	52.26	10.57	48.55	9.53	44.80	8.51	42.95	8.03	41.06	7.56	37.35	6.72	
21.0	19.5	52.26	9.68	48.55	8.73	44.80	7.68	42.95	7.31	41.06	6.91	37.35	6.16	
24.0	22.4	52.26	8.88	48.55	7.89	44.80	6.94	42.95	6.63	41.06	6.32	37.35	5.67	
27.0	25.3	52.26	8.03	48.55	7.07	44.80	6.32	42.95	6.02	41.06	5.66	37.35	4.97	
30.0	28.1	52.26	7.26	48.55	6.33	44.80	5.76	42.95	5.46	41.06	5.06	37.35	4.35	

**Abbreviations:**

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

**Notes:**

Shaded cells indicate rating condition.

Table continued on next page ...



Table 2-8.19: 18HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
70%	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
	-30.0	-30.5	25.06	10.45	24.64	10.77	24.63	11.30	24.47	11.49	23.63	11.03	22.88	10.76
	-25.0	-25.4	26.17	11.05	25.78	11.38	25.40	11.72	25.21	11.89	24.83	11.75	24.09	11.48
	-19.8	-20.0	26.91	11.51	26.49	11.81	26.07	12.10	25.86	12.26	25.61	12.30	24.94	12.05
	-18.8	-19.0	27.04	11.58	26.61	11.88	26.19	12.16	25.97	12.31	25.75	12.44	24.94	11.85
	-16.7	-17.0	27.28	11.72	26.84	11.97	26.40	12.27	26.19	12.41	25.81	12.20	24.94	11.51
	-13.7	-15.0	27.51	11.88	27.06	12.16	26.61	12.45	26.23	12.23	25.81	11.98	24.94	11.24
	-11.8	-13.0	27.72	11.96	27.26	12.22	26.64	12.14	26.23	11.89	25.81	11.65	24.94	10.86
	-9.8	-11.0	27.92	12.03	27.43	12.23	26.64	11.80	26.23	11.55	25.81	11.17	24.94	10.36
	-9.5	-10.0	28.02	11.99	27.43	11.90	26.64	11.42	26.23	11.16	25.81	10.76	24.94	9.89
	-8.5	-9.1	28.10	12.04	27.43	11.68	26.64	11.10	26.23	10.83	25.81	10.40	24.94	9.51
	-7.0	-7.6	28.19	11.95	27.43	11.33	26.64	10.74	26.23	10.45	25.81	10.01	24.94	9.09
	-5.0	-5.6	27.68	11.38	26.94	10.77	26.17	10.16	25.77	9.86	25.36	9.43	24.51	8.47
	-3.0	-3.7	28.51	11.23	27.73	10.56	26.93	9.90	26.51	9.55	26.09	9.14	25.20	8.29
	0.0	-0.7	30.67	11.09	29.81	10.34	28.92	9.55	28.45	9.17	27.98	8.77	26.99	8.28
	3.0	2.2	34.19	11.18	33.17	10.39	32.12	9.52	31.57	9.18	31.01	8.93	29.83	8.41
	5.0	4.1	37.03	11.34	35.89	10.46	34.70	9.66	34.07	9.35	32.97	8.94	31.84	8.42
	7.0	6.0	42.10	12.02	40.33	10.90	39.20	10.30	37.55	9.73	35.93	9.04	32.67	7.87
	9.0	7.9	42.58	11.29	41.26	10.44	39.20	9.60	37.55	8.93	35.93	8.36	32.67	7.40
	11.0	9.8	43.71	10.74	42.45	10.20	39.20	8.99	37.55	8.33	35.93	7.87	32.67	6.99
13.0	11.8	44.68	10.34	42.45	9.53	39.20	8.35	37.55	7.80	35.93	7.33	32.67	6.59	
15.0	13.7	45.74	9.90	42.45	8.91	39.20	7.76	37.55	7.35	35.93	6.92	32.67	6.22	
18.0	16.6	45.74	8.71	42.45	7.87	39.20	7.11	37.55	6.75	35.93	6.47	32.67	5.74	
21.0	19.5	45.74	7.87	42.45	7.14	39.20	6.55	37.55	6.16	35.93	5.90	32.67	5.22	
24.0	22.4	45.74	7.08	42.45	6.48	39.20	5.98	37.55	5.67	35.93	5.35	32.67	4.74	
27.0	25.3	45.74	6.39	42.45	5.86	39.20	5.31	37.55	4.99	35.93	4.77	32.67	4.21	
30.0	28.1	45.74	5.77	42.45	5.29	39.20	4.72	37.55	4.39	35.93	4.24	32.67	3.73	
60%	-30.0	-30.5	22.55	10.01	22.23	10.32	21.56	10.04	21.30	10.03	21.07	10.08	20.36	9.87
	-25.0	-25.4	23.16	10.43	22.81	10.73	22.23	10.55	21.93	10.43	21.63	10.31	20.90	9.88
	-19.8	-20.0	23.70	10.84	23.32	11.11	22.81	11.04	22.48	10.81	22.12	10.51	21.38	9.85
	-18.8	-19.0	23.79	10.91	23.41	11.17	22.83	10.90	22.48	10.61	22.12	10.33	21.38	9.67
	-16.7	-17.0	23.97	11.00	23.51	11.08	22.83	10.62	22.48	10.34	22.12	10.00	21.38	9.32
	-13.7	-15.0	24.13	11.19	23.51	10.90	22.83	10.41	22.48	10.11	22.12	9.76	21.38	9.01
	-11.8	-13.0	24.17	10.94	23.51	10.62	22.83	10.06	22.48	9.73	22.12	9.38	21.38	8.60
	-9.8	-11.0	24.17	10.66	23.51	10.21	22.83	9.60	22.48	9.28	22.12	8.94	21.38	8.20
	-9.5	-10.0	24.17	10.29	23.51	9.82	22.83	9.24	22.48	8.88	22.12	8.54	21.38	7.86
	-8.5	-9.1	24.17	10.00	23.51	9.50	22.83	8.90	22.48	8.54	22.12	8.18	21.38	7.71
	-7.0	-7.6	24.17	9.68	23.51	9.16	22.83	8.52	22.48	8.16	22.12	7.83	21.38	7.48
	-5.0	-5.6	23.73	9.16	23.09	8.63	22.43	7.96	22.09	7.62	21.74	7.39	21.01	7.05
	-3.0	-3.7	24.44	8.96	23.77	8.38	23.08	7.68	22.73	7.44	22.36	7.20	21.60	6.85
	0.0	-0.7	26.29	8.68	25.55	8.08	24.79	7.64	24.39	7.46	23.98	7.20	23.13	6.78
	3.0	2.2	29.30	8.68	28.44	8.21	27.53	7.82	27.06	7.61	26.58	7.42	25.57	6.92
	5.0	4.1	31.74	8.81	30.76	8.38	29.74	7.95	29.21	7.71	28.25	7.37	27.29	6.98
	7.0	6.0	36.08	9.45	34.57	8.80	33.60	8.15	32.20	7.75	30.79	7.25	28.01	6.54
	9.0	7.9	36.50	8.88	35.37	8.24	33.60	7.67	32.20	7.26	30.79	6.89	28.01	6.26
	11.0	9.8	37.47	8.56	36.40	7.95	33.60	7.17	32.20	6.85	30.79	6.53	28.01	5.91
	13.0	11.8	38.30	8.12	36.40	7.41	33.60	6.75	32.20	6.45	30.79	6.16	28.01	5.56
15.0	13.7	39.20	7.68	36.40	7.00	33.60	6.39	32.20	6.08	30.79	5.82	28.01	5.24	
18.0	16.6	39.20	7.05	36.40	6.50	33.60	5.92	32.20	5.60	30.79	5.33	28.01	4.78	
21.0	19.5	39.20	6.49	36.40	5.92	33.60	5.37	32.20	5.09	30.79	4.85	28.01	4.37	
24.0	22.4	39.20	5.90	36.40	5.43	33.60	4.97	32.20	4.64	30.79	4.37	28.01	3.90	
27.0	25.3	39.20	5.25	36.40	4.77	33.60	4.30	32.20	4.09	30.79	3.89	28.01	3.48	
30.0	28.1	39.20	4.68	36.40	4.19	33.60	3.72	32.20	3.60	30.79	3.46	28.01	3.11	

Abbreviations:  
 CR: Combination ratio  
 TC: Total capacity (kW)  
 PI: Power input (compressor + outdoor fan motor) (kW)  
 Notes:  
 Shaded cells indicate rating condition.

Table continued on next page ...



Table 2-8.19: 18HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
50%	-30.0	-30.5	19.40	9.18	18.99	9.25	18.51	9.04	18.21	8.87	17.93	8.76	17.33	8.42
	-25.0	-25.4	19.79	9.43	19.31	9.24	18.78	8.96	18.48	8.76	18.19	8.56	17.58	8.14
	-19.8	-20.0	20.14	9.67	19.59	9.23	19.03	8.87	18.74	8.64	18.44	8.35	17.81	7.87
	-18.8	-19.0	20.14	9.49	19.59	9.05	19.03	8.59	18.74	8.36	18.44	8.09	17.81	7.57
	-16.7	-17.0	20.14	9.29	19.59	8.83	19.03	8.30	18.74	8.06	18.44	7.75	17.81	7.31
	-13.7	-15.0	20.14	9.10	19.59	8.59	19.03	8.04	18.74	7.78	18.44	7.44	17.81	7.12
	-11.8	-13.0	20.14	8.76	19.59	8.27	19.03	7.69	18.74	7.42	18.44	7.16	17.81	6.85
	-9.8	-11.0	20.14	8.34	19.59	7.86	19.03	7.33	18.74	7.11	18.44	6.90	17.81	6.58
	-9.5	-10.0	20.14	7.97	19.59	7.51	19.03	7.01	18.74	6.84	18.44	6.70	17.81	6.41
	-8.5	-9.1	20.14	7.67	19.59	7.18	19.03	6.84	18.74	6.70	18.44	6.56	17.81	6.28
	-7.0	-7.6	20.14	7.32	19.59	6.89	19.03	6.63	18.74	6.50	18.44	6.36	17.81	6.09
	-5.0	-5.6	19.77	6.82	19.24	6.50	18.69	6.24	18.41	6.10	18.11	5.99	17.51	5.73
	-3.0	-3.7	20.36	6.66	19.81	6.34	19.24	6.07	18.94	5.96	18.63	5.83	18.00	5.63
	0.0	-0.7	21.91	6.69	21.29	6.35	20.66	6.07	20.33	5.91	19.99	5.81	19.28	5.62
	3.0	2.2	24.42	6.85	23.70	6.56	22.95	6.21	22.56	6.08	22.15	5.98	21.31	5.79
	5.0	4.1	26.45	6.93	25.64	6.64	24.78	6.32	24.34	6.22	23.55	5.97	22.74	5.77
	7.0	6.0	30.07	7.14	28.81	6.72	28.00	6.51	26.84	6.22	25.67	5.92	23.33	5.36
	9.0	7.9	30.41	6.80	29.47	6.52	28.01	6.19	26.84	5.91	25.67	5.68	23.33	5.11
	11.0	9.8	31.22	6.57	30.33	6.37	28.01	5.86	26.84	5.60	25.67	5.33	23.33	4.84
	13.0	11.8	31.92	6.32	30.33	5.99	28.01	5.51	26.84	5.27	25.67	5.03	23.33	4.56
15.0	13.7	32.67	6.10	30.33	5.67	28.01	5.21	26.84	4.97	25.67	4.76	23.33	4.32	
18.0	16.6	32.67	5.61	30.33	5.19	28.01	4.76	26.84	4.56	25.67	4.34	23.33	3.93	
21.0	19.5	32.67	5.15	30.33	4.72	28.01	4.30	26.84	4.14	25.67	3.94	23.33	3.56	
24.0	22.4	32.67	4.65	30.33	4.23	28.01	3.86	26.84	3.70	25.67	3.48	23.33	3.12	
27.0	25.3	32.67	4.10	30.33	3.78	28.01	3.42	26.84	3.26	25.67	3.08	23.33	2.77	
30.0	28.1	32.67	3.62	30.33	3.37	28.01	3.03	26.84	2.87	25.67	2.73	23.33	2.46	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.



Table 2-8.20: 20HP heating capacity

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
130%	-30.0	-30.5	44.38	15.14	43.52	15.64	42.67	16.16	42.24	16.44	41.82	16.73	40.96	17.21
	-25.0	-25.4	44.38	15.39	43.52	15.85	42.67	16.29	42.24	16.53	41.82	16.76	40.96	17.20
	-19.8	-20.0	44.38	15.65	43.52	16.05	42.67	16.42	42.24	16.62	41.82	16.79	40.96	17.19
	-18.8	-19.0	44.38	15.66	43.52	16.04	42.67	16.41	42.24	16.59	41.82	16.78	40.96	17.16
	-16.7	-17.0	44.38	15.65	43.52	16.02	42.67	16.38	42.24	16.56	41.82	16.72	41.30	17.24
	-13.7	-15.0	44.38	15.70	43.86	16.20	43.09	16.58	42.71	16.77	42.32	16.96	41.56	17.34
	-11.8	-13.0	44.92	15.83	44.14	16.18	44.06	16.83	43.70	17.03	43.35	17.22	42.64	17.64
	-9.8	-11.0	46.01	16.10	45.29	16.48	44.56	16.90	44.20	17.08	43.84	17.28	43.11	17.69
	-9.5	-10.0	46.27	16.04	45.54	16.43	44.81	16.81	44.44	17.02	44.07	17.20	43.34	17.60
	-8.5	-9.1	46.50	16.07	45.76	16.47	45.02	16.86	44.65	17.04	44.28	17.24	43.53	17.63
	-7.0	-7.6	46.87	16.10	46.12	16.49	45.36	16.86	44.98	17.05	44.60	17.23	43.85	17.63
	-5.0	-5.6	46.55	15.84	45.79	16.20	45.03	16.57	44.65	16.76	44.27	16.95	43.50	17.32
	-3.0	-3.7	48.24	16.07	47.46	16.42	46.66	16.79	46.26	16.99	45.87	17.16	45.07	17.54
	0.0	-0.7	52.33	16.82	51.48	17.18	50.62	17.59	50.19	17.79	49.76	17.97	48.89	18.36
	3.0	2.2	58.69	18.23	57.75	18.64	56.80	19.09	56.32	19.30	55.85	19.49	54.89	19.93
	5.0	4.1	63.86	19.41	62.85	19.87	61.84	20.31	61.33	20.53	60.81	20.77	59.78	21.23
	7.0	6.0	72.99	21.72	71.59	22.16	70.18	22.57	69.48	22.79	68.78	23.00	67.37	22.86
	9.0	7.9	75.32	21.98	73.88	22.41	72.43	22.82	71.70	23.06	70.98	23.27	68.26	22.09
	11.0	9.8	77.66	22.19	76.17	22.63	74.67	23.08	73.93	23.31	73.18	23.20	68.26	21.02
	13.0	11.8	80.00	22.39	78.46	22.86	76.92	23.30	76.15	23.40	75.07	22.65	68.26	19.67
	15.0	13.7	82.33	22.57	80.75	23.08	79.17	23.54	78.37	22.99	75.07	21.59	68.26	18.38
18.0	16.6	85.84	23.13	84.18	23.64	81.91	22.30	78.51	20.52	75.07	18.84	68.26	15.66	
21.0	19.5	89.34	23.48	87.62	23.27	81.91	20.98	78.51	19.28	75.07	17.57	68.26	14.51	
24.0	22.4	92.84	23.81	88.74	22.27	81.91	19.26	78.51	17.61	75.07	16.08	68.26	13.42	
27.0	25.3	92.84	22.56	88.74	20.43	81.91	17.25	78.51	15.74	75.07	14.34	68.26	12.13	
30.0	28.1	95.69	22.02	88.74	18.74	81.91	15.44	78.51	14.07	75.07	12.78	68.26	10.97	
120%	-30.0	-30.5	42.43	14.82	41.61	15.34	40.79	15.86	40.39	16.14	39.98	16.39	39.16	16.91
	-25.0	-25.4	42.43	15.08	41.61	15.53	40.79	15.98	40.39	16.20	39.98	16.43	39.16	16.87
	-19.8	-20.0	42.43	15.35	41.61	15.71	40.79	16.09	40.39	16.27	39.98	16.46	39.16	16.83
	-18.8	-19.0	42.43	15.36	41.61	15.71	40.79	16.06	40.39	16.24	39.98	16.42	39.16	16.79
	-16.7	-17.0	42.43	15.35	41.61	15.69	41.14	16.19	40.78	16.37	40.41	16.54	39.69	16.93
	-13.7	-15.0	42.89	15.57	42.15	15.94	42.02	16.57	41.69	16.75	41.35	16.97	40.69	17.40
	-11.8	-13.0	43.88	15.86	43.20	16.25	42.52	16.63	42.18	16.84	41.83	17.05	41.15	17.45
	-9.8	-11.0	44.40	15.91	43.69	16.32	42.99	16.69	42.64	16.90	42.29	17.09	41.58	17.48
	-9.5	-10.0	44.64	15.87	43.93	16.26	43.22	16.64	42.86	16.81	42.50	17.01	41.79	17.40
	-8.5	-9.1	44.85	15.90	44.13	16.29	43.41	16.65	43.05	16.84	42.69	17.04	41.97	17.43
	-7.0	-7.6	45.19	15.93	44.46	16.31	43.73	16.67	43.36	16.86	42.99	17.05	42.25	17.43
	-5.0	-5.6	44.86	15.68	44.12	16.05	43.38	16.39	43.01	16.58	42.64	16.76	41.90	17.11
	-3.0	-3.7	46.49	15.92	45.72	16.27	44.95	16.62	44.57	16.80	44.18	16.98	43.41	17.35
	0.0	-0.7	50.44	16.66	49.61	17.05	48.78	17.43	48.36	17.62	47.94	17.80	47.10	18.19
	3.0	2.2	56.60	18.13	55.67	18.55	54.76	18.95	54.30	19.14	53.84	19.36	52.53	19.15
	5.0	4.1	61.61	19.32	60.64	19.77	59.64	20.22	59.14	20.44	58.65	20.65	56.70	19.75
	7.0	6.0	69.78	21.46	68.44	21.87	67.62	22.48	67.01	22.70	66.26	22.52	63.00	20.92
	9.0	7.9	72.01	21.72	70.63	22.14	69.81	22.79	69.10	22.76	67.86	22.04	63.00	19.62
	11.0	9.8	74.24	21.94	72.82	22.40	71.99	22.98	70.68	22.21	69.31	21.48	63.00	18.36
	13.0	11.8	76.48	22.19	75.57	22.80	73.54	22.46	72.46	21.67	69.31	20.36	63.00	17.07
	15.0	13.7	78.71	22.44	77.81	23.08	75.60	22.03	72.46	20.63	69.31	19.01	63.00	15.89
18.0	16.6	82.06	22.99	80.48	21.91	75.60	19.13	72.46	17.64	69.31	16.20	63.00	13.74	
21.0	19.5	85.41	22.68	81.91	21.08	75.60	17.90	72.46	16.38	69.31	15.04	63.00	12.66	
24.0	22.4	88.21	22.13	81.91	19.30	75.60	16.38	72.46	15.01	69.31	13.82	63.00	11.57	
27.0	25.3	88.21	20.22	81.91	17.31	75.60	14.58	72.46	13.51	69.31	12.51	63.00	10.49	
30.0	28.1	88.21	18.48	81.91	15.53	75.60	12.98	72.46	12.16	69.31	11.32	63.00	9.51	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

Table 2-8.20: 20HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
110%	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	
	-30.0	-30.5	40.08	14.46	39.30	14.95	38.53	15.42	38.15	15.71	37.76	15.90	36.99	16.37
	-25.0	-25.4	40.08	14.67	39.30	15.09	38.53	15.52	38.15	15.74	37.76	15.92	36.99	16.34
	-19.8	-20.0	40.08	14.88	39.30	15.23	38.53	15.61	38.15	15.77	38.07	16.07	37.39	16.49
	-18.8	-19.0	40.08	14.90	39.30	15.22	38.88	15.73	38.53	15.90	38.19	16.11	37.50	16.51
	-16.7	-17.0	40.52	15.05	39.82	15.42	39.72	16.04	39.41	16.24	39.10	16.44	38.48	16.87
	-13.7	-15.0	41.49	15.49	40.84	15.88	40.20	16.28	39.88	16.47	39.56	16.68	38.91	17.08
	-11.8	-13.0	41.97	15.56	41.31	15.95	40.65	16.35	40.32	16.53	39.99	16.74	39.32	17.13
	-9.8	-11.0	42.43	15.67	41.75	16.03	41.08	16.41	40.73	16.58	40.39	16.78	39.71	17.17
	-9.5	-10.0	42.65	15.61	41.97	15.96	41.28	16.34	40.93	16.53	40.59	16.71	39.90	17.10
	-8.5	-9.1	42.84	15.64	42.15	15.99	41.45	16.37	41.11	16.55	40.76	16.73	40.06	17.11
	-7.0	-7.6	43.15	15.67	42.44	16.01	41.74	16.39	41.38	16.56	41.03	16.75	40.32	17.10
	-5.0	-5.6	42.80	15.41	42.09	15.76	41.38	16.10	41.02	16.28	40.66	16.45	39.95	16.81
	-3.0	-3.7	44.35	15.65	43.61	15.98	42.87	16.34	42.50	16.50	42.13	16.68	41.39	17.03
	0.0	-0.7	48.11	16.44	47.32	16.80	46.52	17.16	46.12	17.35	45.71	17.53	44.44	17.29
	3.0	2.2	54.02	17.91	53.15	18.31	52.26	18.72	51.81	18.92	51.14	18.59	49.29	17.60
	5.0	4.1	58.87	19.15	57.92	19.57	56.96	20.02	56.28	19.80	55.27	19.16	53.15	17.81
	7.0	6.0	66.62	21.25	65.46	21.70	64.19	21.85	63.26	21.21	62.11	20.52	57.76	18.13
	9.0	7.9	68.78	21.54	67.58	22.03	65.96	21.39	64.75	20.71	63.54	19.98	57.76	16.94
	11.0	9.8	70.94	21.84	69.65	22.18	67.43	20.84	66.41	20.21	63.54	18.72	57.76	15.77
	13.0	11.8	73.13	22.11	71.45	21.72	69.31	20.37	66.41	18.90	63.54	17.42	57.76	14.59
15.0	13.7	75.25	22.25	72.92	21.13	69.31	19.09	66.41	17.61	63.54	16.20	57.76	13.73	
18.0	16.6	77.51	20.87	75.07	18.90	69.31	16.22	66.41	14.92	63.54	13.94	57.76	12.03	
21.0	19.5	80.68	20.40	75.07	17.63	69.31	14.99	66.41	13.81	63.54	12.89	57.76	11.02	
24.0	22.4	80.86	18.80	75.07	16.19	69.31	13.86	66.41	12.73	63.54	11.86	57.76	9.95	
27.0	25.3	80.86	16.84	75.07	14.40	69.31	12.52	66.41	11.66	63.54	10.75	57.76	8.88	
30.0	28.1	80.86	15.08	75.07	12.81	69.31	11.31	66.41	10.68	63.54	9.74	57.76	7.93	
100%	-30.0	-30.5	39.84	14.84	39.07	15.32	38.30	15.82	37.92	16.02	37.54	16.28	36.77	16.78
	-25.0	-25.4	39.84	15.03	39.07	15.45	38.30	15.89	37.92	16.08	37.54	16.30	36.77	16.74
	-19.8	-20.0	39.84	15.22	39.07	15.58	38.30	15.96	37.92	16.14	37.84	16.46	37.16	16.88
	-18.8	-19.0	39.84	15.24	39.07	15.60	38.64	16.10	38.30	16.32	37.96	16.49	37.28	16.90
	-16.7	-17.0	40.28	15.42	39.58	15.78	39.48	16.42	39.18	16.64	38.87	16.85	38.25	17.28
	-13.7	-15.0	41.23	15.85	40.59	16.26	39.96	16.67	39.64	16.89	39.32	17.09	38.69	17.52
	-11.8	-13.0	41.72	15.98	41.06	16.36	40.41	16.76	40.08	16.95	39.75	17.15	39.10	17.56
	-9.8	-11.0	42.18	16.06	41.50	16.43	40.83	16.82	40.49	17.02	40.15	17.22	39.48	17.60
	-9.5	-10.0	42.39	16.01	41.71	16.38	41.03	16.76	40.69	16.96	40.35	17.16	39.66	17.54
	-8.5	-9.1	42.58	16.05	41.90	16.42	41.21	16.81	40.86	16.99	40.52	17.18	39.82	17.55
	-7.0	-7.6	42.89	16.09	42.19	16.45	41.49	16.82	41.14	17.01	40.79	17.19	40.08	17.56
	-5.0	-5.6	42.52	15.86	41.82	16.21	41.12	16.58	40.77	16.75	40.41	16.92	39.39	16.76
	-3.0	-3.7	44.05	16.14	43.33	16.47	42.59	16.82	42.23	17.01	41.86	17.20	40.50	16.48
	0.0	-0.7	47.79	16.98	47.00	17.35	46.21	17.72	45.73	17.70	44.97	17.48	43.37	16.12
	3.0	2.2	53.67	18.54	52.79	18.93	51.62	18.77	50.75	18.60	49.84	17.86	47.95	16.16
	5.0	4.1	58.46	19.81	57.52	20.26	55.76	19.36	54.76	18.98	52.98	17.82	51.17	16.11
	7.0	6.0	66.18	22.06	64.82	21.84	63.00	20.86	60.39	19.62	57.76	18.17	52.51	15.43
	9.0	7.9	68.32	22.40	66.32	21.35	63.00	19.78	60.39	18.37	57.76	16.99	52.51	14.35
	11.0	9.8	70.25	22.01	68.26	20.96	63.00	18.49	60.39	17.15	57.76	15.83	52.51	13.55
	13.0	11.8	71.81	21.45	68.26	19.87	63.00	17.18	60.39	15.89	57.76	14.62	52.51	12.66
	15.0	13.7	73.51	20.93	68.26	18.56	63.00	16.00	60.39	14.78	57.76	13.74	52.51	11.83
18.0	16.6	73.51	18.14	68.26	15.74	63.00	13.74	60.39	12.89	57.76	12.05	52.51	10.44	
21.0	19.5	73.51	16.96	68.26	14.51	63.00	12.67	60.39	11.83	57.76	10.97	52.51	9.38	
24.0	22.4	73.51	15.50	68.26	13.48	63.00	11.64	60.39	10.75	57.76	9.90	52.51	8.53	
27.0	25.3	73.51	13.82	68.26	12.20	63.00	10.57	60.39	9.68	57.76	8.84	52.51	7.74	
30.0	28.1	73.51	12.32	68.26	11.03	63.00	9.60	60.39	8.72	57.76	7.90	52.51	7.03	

Abbreviations:

- CR: Combination ratio
- TC: Total capacity (kW)
- PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

Table 2-8.20: 20HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
90%	-30.0	-30.5	35.85	13.78	35.16	14.21	34.47	14.69	34.13	14.93	33.78	15.17	33.09	15.60
	-25.0	-25.4	35.85	13.98	35.16	14.38	34.47	14.78	34.13	14.99	33.78	15.19	33.09	15.57
	-19.8	-20.0	36.38	14.40	36.35	15.03	35.79	15.44	35.51	15.65	35.24	15.87	34.69	16.29
	-18.8	-19.0	37.14	14.71	36.57	15.12	36.01	15.53	35.72	15.73	35.44	15.94	34.88	16.36
	-16.7	-17.0	37.58	14.90	37.00	15.28	36.42	15.68	36.12	15.89	35.83	16.08	35.25	16.48
	-13.7	-15.0	38.00	15.15	37.40	15.51	36.81	15.90	36.50	16.09	36.20	16.29	35.61	16.68
	-11.8	-13.0	38.40	15.23	37.79	15.60	37.17	15.97	36.86	16.16	36.56	16.34	35.94	16.73
	-9.8	-11.0	38.77	15.32	38.14	15.68	37.51	16.05	37.19	16.23	36.88	16.42	36.07	16.35
	-9.5	-10.0	38.94	15.29	38.30	15.63	37.67	15.99	37.35	16.17	37.03	16.35	36.07	15.90
	-8.5	-9.1	39.09	15.33	38.45	15.66	37.81	16.02	37.48	16.20	37.16	16.38	36.07	15.60
	-7.0	-7.6	39.33	15.37	38.68	15.70	38.03	16.06	37.70	16.25	37.33	16.29	36.07	15.11
	-5.0	-5.6	38.94	15.16	38.29	15.48	37.64	15.81	37.27	15.88	36.68	15.57	35.45	14.32
	-3.0	-3.7	40.34	15.42	39.66	15.73	38.95	15.99	38.35	15.68	37.74	15.32	36.45	14.01
	0.0	-0.7	43.79	16.26	43.05	16.62	41.83	16.28	41.16	15.67	40.47	15.01	39.04	13.66
	3.0	2.2	49.24	17.83	47.99	17.58	46.46	16.50	45.67	15.77	44.86	15.07	43.15	13.58
	5.0	4.1	53.57	18.79	51.92	18.19	50.18	16.70	49.29	15.92	47.68	14.94	46.05	13.60
	7.0	6.0	60.89	20.40	58.34	19.19	56.70	17.64	54.35	16.41	51.98	15.19	47.26	13.16
	9.0	7.9	61.59	19.71	59.68	18.38	56.70	16.49	54.35	15.27	51.98	14.19	47.26	12.28
	11.0	9.8	63.23	19.26	61.44	17.69	56.70	15.32	54.35	14.23	51.98	13.36	47.26	11.56
	13.0	11.8	64.63	18.33	61.44	16.42	56.70	14.23	54.35	13.36	51.98	12.56	47.26	10.75
15.0	13.7	66.16	17.52	61.44	15.27	56.70	13.36	54.35	12.56	51.98	11.74	47.26	9.90	
18.0	16.6	66.16	14.77	61.44	13.19	56.70	11.70	54.35	10.97	51.98	10.27	47.26	9.04	
21.0	19.5	66.16	13.77	61.44	12.10	56.70	10.69	54.35	9.87	51.98	9.21	47.26	8.27	
24.0	22.4	66.16	12.73	61.44	11.05	56.70	9.64	54.35	8.88	51.98	8.42	47.26	7.53	
27.0	25.3	66.16	11.52	61.44	9.96	56.70	8.64	54.35	8.04	51.98	7.61	47.26	6.74	
30.0	28.1	66.16	10.43	61.44	8.99	56.70	7.74	54.35	7.28	51.98	6.87	47.26	6.04	
80%	-30.0	-30.5	31.87	12.76	31.26	13.16	30.64	13.58	30.34	13.81	30.03	14.03	29.42	13.62
	-25.0	-25.4	32.26	13.10	31.71	13.50	31.69	14.14	31.46	14.38	31.22	14.61	30.38	14.45
	-19.8	-20.0	33.72	13.90	33.20	14.28	32.68	14.67	32.42	14.87	32.16	15.08	31.64	15.48
	-18.8	-19.0	33.91	14.00	33.38	14.35	32.85	14.75	32.59	14.93	32.32	15.12	31.79	15.54
	-16.7	-17.0	34.26	14.15	33.72	14.50	33.17	14.88	32.90	15.05	32.63	15.25	32.06	15.58
	-13.7	-15.0	34.59	14.38	34.03	14.74	33.47	15.10	33.19	15.29	32.91	15.45	32.06	15.29
	-11.8	-13.0	34.89	14.48	34.32	14.82	33.75	15.17	33.47	15.36	33.18	15.52	32.06	14.86
	-9.8	-11.0	35.18	14.57	34.60	14.90	34.01	15.23	33.72	15.41	33.18	15.13	32.06	14.31
	-9.5	-10.0	35.31	14.54	34.73	14.87	34.14	15.19	33.72	15.02	33.18	14.66	32.06	13.80
	-8.5	-9.1	35.43	14.58	34.84	14.91	34.25	15.22	33.72	14.72	33.18	14.27	32.06	13.38
	-7.0	-7.6	35.62	14.63	35.03	14.94	34.25	14.83	33.72	14.31	33.18	13.85	32.06	12.90
	-5.0	-5.6	35.23	14.41	34.63	14.73	33.64	14.14	33.13	13.61	32.61	13.13	31.51	12.17
	-3.0	-3.7	36.48	14.70	35.66	14.54	34.62	13.91	34.09	13.35	33.54	12.84	32.40	11.78
	0.0	-0.7	39.44	15.07	38.33	14.62	37.18	13.54	36.59	12.99	35.97	12.44	34.70	11.38
	3.0	2.2	43.95	15.95	42.65	14.78	41.30	13.59	40.60	12.99	39.87	12.38	38.35	11.55
	5.0	4.1	47.61	16.21	46.15	14.98	44.61	13.72	43.81	13.06	42.38	12.43	40.93	11.64
	7.0	6.0	54.12	17.26	51.86	15.70	50.40	14.39	48.31	13.58	46.20	12.74	42.00	11.18
	9.0	7.9	54.74	16.31	53.05	14.98	50.41	13.58	48.31	12.74	46.20	11.86	42.00	10.13
	11.0	9.8	56.20	15.63	54.60	14.32	50.41	12.73	48.31	11.97	46.20	11.18	42.00	9.48
	13.0	11.8	57.45	14.80	54.60	13.43	50.41	11.91	48.31	11.13	46.20	10.36	42.00	8.89
15.0	13.7	58.80	14.09	54.60	12.64	50.41	11.09	48.31	10.29	46.20	9.52	42.00	8.46	
18.0	16.6	58.80	12.28	54.60	11.02	50.41	9.76	48.31	9.21	46.20	8.79	42.00	7.80	
21.0	19.5	58.80	11.29	54.60	9.95	50.41	8.84	48.31	8.43	46.20	8.04	42.00	7.20	
24.0	22.4	58.80	10.25	54.60	8.89	50.41	8.05	48.31	7.66	46.20	7.30	42.00	6.58	
27.0	25.3	58.80	9.16	54.60	8.04	50.41	7.27	48.31	6.92	46.20	6.54	42.00	5.70	
30.0	28.1	58.80	8.20	54.60	7.27	50.41	6.56	48.31	6.25	46.20	5.86	42.00	4.94	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

Table2-8.20:20HP heating capacity(continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
70%	-30.0	-30.5	28.23	11.84	28.17	12.42	27.77	12.94	27.50	12.99	26.52	12.30	25.74	11.84
	-25.0	-25.4	29.50	12.59	29.06	12.98	28.61	13.42	28.36	13.55	27.91	13.35	26.92	12.80
	-19.8	-20.0	30.32	13.15	29.84	13.51	29.35	13.86	29.12	14.06	28.88	14.23	28.06	13.79
	-18.8	-19.0	30.45	13.24	29.97	13.58	29.48	13.94	29.24	14.13	29.00	14.30	28.06	13.54
	-16.7	-17.0	30.72	13.39	30.22	13.72	29.72	14.06	29.47	14.25	29.04	14.01	28.06	13.16
	-13.7	-15.0	30.97	13.62	30.46	13.94	29.95	14.29	29.51	14.03	29.04	13.78	28.06	12.85
	-11.8	-13.0	31.20	13.71	30.68	14.02	29.97	13.93	29.51	13.67	29.04	13.36	28.06	12.40
	-9.8	-11.0	31.42	13.78	30.86	14.00	29.97	13.56	29.51	13.21	29.04	12.77	28.06	11.82
	-9.5	-10.0	31.52	13.76	30.86	13.63	29.97	13.12	29.51	12.76	29.04	12.30	28.06	11.33
	-8.5	-9.1	31.62	13.80	30.86	13.37	29.97	12.75	29.51	12.38	29.04	11.90	28.06	10.90
	-7.0	-7.6	31.72	13.70	30.86	13.01	29.97	12.34	29.51	11.96	29.04	11.46	28.06	10.46
	-5.0	-5.6	31.14	13.08	30.30	12.37	29.44	11.68	28.99	11.27	28.53	10.78	27.58	9.87
	-3.0	-3.7	32.07	12.91	31.20	12.15	30.30	11.33	29.83	10.88	29.35	10.44	28.35	9.58
	0.0	-0.7	34.51	12.69	33.54	11.82	32.53	10.92	32.01	10.52	31.48	10.20	30.36	9.55
	3.0	2.2	38.46	12.80	37.32	11.84	36.14	11.03	35.52	10.70	34.89	10.39	33.56	9.71
	5.0	4.1	41.66	12.93	40.38	11.93	39.03	11.20	38.33	10.92	37.09	10.34	35.82	9.67
	7.0	6.0	47.36	13.69	45.38	12.66	44.10	11.91	42.26	11.28	40.43	10.46	36.76	9.04
	9.0	7.9	47.90	12.95	46.42	12.15	44.10	10.95	42.26	10.19	40.43	9.57	36.76	8.50
	11.0	9.8	49.18	12.52	47.78	11.72	44.10	10.17	42.26	9.52	40.43	8.99	36.76	8.05
	13.0	11.8	50.27	11.99	47.78	10.90	44.10	9.44	42.26	8.96	40.43	8.50	36.76	7.58
15.0	13.7	51.46	11.44	47.78	10.04	44.10	8.98	42.26	8.49	40.43	8.04	36.76	7.19	
18.0	16.6	51.46	10.00	47.78	9.04	44.10	8.28	42.26	7.84	40.43	7.39	36.76	6.58	
21.0	19.5	51.46	9.00	47.78	8.27	44.10	7.57	42.26	7.19	40.43	6.74	36.76	6.00	
24.0	22.4	51.46	8.15	47.78	7.50	44.10	6.88	42.26	6.58	40.43	6.12	36.76	5.39	
27.0	25.3	51.46	7.39	47.78	6.77	44.10	6.04	42.26	5.69	40.43	5.35	36.76	4.72	
30.0	28.1	51.46	6.70	47.78	6.11	44.10	5.30	42.26	4.91	40.43	4.67	36.76	4.14	
60%	-30.0	-30.5	25.43	11.33	25.06	11.76	24.12	11.09	23.76	11.03	23.36	10.93	22.32	10.63
	-25.0	-25.4	26.10	11.87	25.69	12.25	24.96	11.89	24.58	11.70	24.18	11.49	23.36	11.04
	-19.8	-20.0	26.68	12.39	26.25	12.72	25.69	12.68	25.29	12.34	24.89	12.01	24.05	11.27
	-18.8	-19.0	26.78	12.45	26.35	12.80	25.69	12.46	25.29	12.12	24.89	11.77	24.05	11.05
	-16.7	-17.0	26.98	12.61	26.45	12.67	25.69	12.18	25.29	11.82	24.89	11.41	24.05	10.65
	-13.7	-15.0	27.16	12.83	26.45	12.45	25.69	11.95	25.29	11.55	24.89	11.13	24.05	10.31
	-11.8	-13.0	27.19	12.53	26.45	12.11	25.69	11.47	25.29	11.12	24.89	10.71	24.05	9.88
	-9.8	-11.0	27.19	12.21	26.45	11.67	25.69	10.95	25.29	10.59	24.89	10.20	24.05	9.48
	-9.5	-10.0	27.19	11.82	26.45	11.29	25.69	10.48	25.29	10.16	24.89	9.76	24.05	9.13
	-8.5	-9.1	27.19	11.48	26.45	10.90	25.69	10.10	25.29	9.75	24.89	9.43	24.05	8.95
	-7.0	-7.6	27.19	11.12	26.45	10.52	25.69	9.66	25.29	9.38	24.89	9.10	24.05	8.66
	-5.0	-5.6	26.69	10.53	25.98	9.92	25.23	9.10	24.85	8.84	24.46	8.61	23.64	8.13
	-3.0	-3.7	27.49	10.25	26.74	9.56	25.97	8.85	25.57	8.61	25.16	8.34	24.30	7.90
	0.0	-0.7	29.99	10.11	29.17	9.54	28.33	9.09	27.89	8.80	27.45	8.50	26.52	8.02
	3.0	2.2	33.50	10.26	32.55	9.76	31.55	9.27	31.04	9.01	30.51	8.71	29.41	8.26
	5.0	4.1	36.37	10.52	35.29	9.97	34.16	9.38	33.58	9.06	32.98	8.80	31.72	8.43
	7.0	6.0	41.51	11.30	40.18	10.62	38.29	9.44	37.74	9.28	37.04	9.09	34.51	8.43
	9.0	7.9	42.52	10.65	41.14	9.78	39.35	9.16	38.62	8.97	37.96	8.74	34.51	7.89
	11.0	9.8	43.51	10.14	41.55	9.25	40.22	8.86	39.67	8.69	37.96	8.29	34.51	7.46
	13.0	11.8	44.48	9.55	42.62	8.94	41.40	8.64	39.67	8.19	37.96	7.80	34.51	7.02
15.0	13.7	44.89	9.07	43.49	8.69	41.40	8.10	39.67	7.71	37.96	7.36	34.51	6.63	
18.0	16.6	46.23	8.64	44.86	8.20	41.40	7.45	39.67	7.08	37.96	6.75	34.51	6.08	
21.0	19.5	48.12	8.21	44.86	7.52	41.40	6.80	39.67	6.50	37.96	6.11	34.51	5.49	
24.0	22.4	48.30	7.47	44.86	6.85	41.40	6.19	39.67	5.81	37.96	5.49	34.51	4.89	
27.0	25.3	48.30	6.56	44.86	5.93	41.40	5.36	39.67	5.09	37.96	4.83	34.51	4.32	
30.0	28.1	48.30	5.77	44.86	5.13	41.40	4.64	39.67	4.45	37.96	4.24	34.51	3.82	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

Table 2-8.20: 20HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
50%	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
	-30.0	-30.5	22.16	10.58	21.59	10.42	21.00	10.22	20.70	10.12	20.38	9.96	19.75	9.64
	-25.0	-25.4	22.57	10.91	21.98	10.58	21.37	10.22	21.06	10.03	20.74	9.81	20.07	9.41
	-19.8	-20.0	22.94	11.22	22.33	10.72	21.71	10.20	21.39	9.93	21.06	9.65	20.37	9.16
	-18.8	-19.0	22.94	11.03	22.33	10.52	21.71	10.00	21.39	9.72	21.06	9.43	20.37	9.04
	-16.7	-17.0	22.94	10.78	22.33	10.26	21.71	9.69	21.39	9.34	21.06	9.07	20.37	8.74
	-13.7	-15.0	22.94	10.57	22.33	10.01	21.71	9.38	21.39	9.04	21.06	8.81	20.37	8.48
	-11.8	-13.0	22.94	10.16	22.33	9.62	21.71	8.97	21.39	8.70	21.06	8.46	20.37	8.14
	-9.8	-11.0	22.94	9.68	22.33	9.12	21.71	8.63	21.39	8.37	21.06	8.12	20.37	7.78
	-9.5	-10.0	22.94	9.28	22.33	8.70	21.71	8.30	21.39	8.09	21.06	7.90	20.37	7.56
	-8.5	-9.1	22.94	8.92	22.33	8.40	21.71	8.10	21.39	7.92	21.06	7.76	20.37	7.41
	-7.0	-7.6	22.94	8.54	22.33	8.15	21.71	7.83	21.39	7.66	21.06	7.50	20.37	7.18
	-5.0	-5.6	22.51	8.05	21.93	7.65	21.32	7.33	21.00	7.17	20.68	7.03	20.02	6.81
	-3.0	-3.7	23.20	7.85	22.59	7.45	21.95	7.14	21.62	6.97	21.29	6.87	20.60	6.69
	0.0	-0.7	24.99	7.88	24.31	7.45	23.61	7.08	23.24	6.98	22.87	6.87	22.10	6.66
	3.0	2.2	27.92	8.08	27.12	7.66	26.30	7.33	25.87	7.20	25.43	7.07	24.51	6.85
	5.0	4.1	30.31	8.19	29.41	7.78	28.47	7.48	27.98	7.39	27.48	7.27	26.43	6.83
	7.0	6.0	34.59	8.40	33.48	8.11	31.91	7.73	31.45	7.59	30.87	7.46	28.76	6.97
	9.0	7.9	35.43	8.12	34.28	7.79	32.79	7.40	32.18	7.26	31.63	7.11	28.76	6.43
	11.0	9.8	36.26	7.84	34.62	7.45	33.52	7.17	33.06	7.04	31.63	6.72	28.76	6.11
13.0	11.8	37.07	7.55	35.52	7.21	34.51	6.94	33.06	6.63	31.63	6.34	28.76	5.75	
15.0	13.7	37.41	7.22	36.24	6.92	34.51	6.56	33.06	6.28	31.63	6.02	28.76	5.47	
18.0	16.6	38.53	6.78	37.37	6.53	34.51	5.98	33.06	5.71	31.63	5.45	28.76	4.97	
21.0	19.5	40.10	6.42	37.37	5.90	34.51	5.40	33.06	5.15	31.63	4.90	28.76	4.45	
24.0	22.4	40.26	5.81	37.37	5.28	34.51	4.81	33.06	4.58	31.63	4.33	28.76	3.92	
27.0	25.3	40.26	5.07	37.37	4.64	34.51	4.23	33.06	4.00	31.63	3.80	28.76	3.44	
30.0	28.1	40.26	4.43	37.37	4.09	34.51	3.72	33.06	3.49	31.63	3.33	28.76	3.02	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table 2-8.21: 22HP heating capacity

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
130%	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
	-30.0	-30.5	48.60	15.95	47.67	16.50	46.73	17.05	46.27	17.32	45.80	17.63	44.87	18.17
	-25.0	-25.4	48.60	16.22	47.67	16.70	46.73	17.18	46.27	17.41	45.80	17.66	44.87	18.14
	-19.8	-20.0	48.60	16.49	47.67	16.91	46.73	17.30	46.27	17.49	45.80	17.69	44.87	18.11
	-18.8	-19.0	48.60	16.50	47.67	16.88	46.73	17.29	46.27	17.49	45.80	17.68	44.87	18.08
	-16.7	-17.0	48.60	16.49	47.67	16.88	46.73	17.23	46.27	17.44	45.80	17.62	45.23	18.16
	-13.7	-15.0	48.60	16.55	48.04	17.07	47.20	17.46	46.78	17.66	46.36	17.87	45.51	18.28
	-11.8	-13.0	49.19	16.68	48.34	17.04	48.25	17.72	47.87	17.93	47.48	18.15	46.71	18.59
	-9.8	-11.0	50.39	16.95	49.60	17.36	48.81	17.81	48.41	17.99	48.02	18.20	47.22	18.65
	-9.5	-10.0	50.67	16.91	49.88	17.32	49.08	17.71	48.67	17.93	48.27	18.14	47.46	18.54
	-8.5	-9.1	50.93	16.93	50.12	17.36	49.31	17.76	48.90	17.97	48.49	18.17	47.68	18.57
	-7.0	-7.6	51.33	16.97	50.51	17.37	49.68	17.77	49.27	17.95	48.85	18.15	48.02	18.58
	-5.0	-5.6	50.98	16.69	50.15	17.08	49.32	17.45	48.90	17.66	48.48	17.87	47.64	18.23
	-3.0	-3.7	52.84	16.92	51.97	17.31	51.11	17.70	50.67	17.89	50.23	18.07	49.36	18.48
	0.0	-0.7	57.32	17.71	56.38	18.11	55.44	18.53	54.97	18.74	54.50	18.93	53.55	19.35
	3.0	2.2	64.28	19.21	63.25	19.65	62.21	20.10	61.69	20.33	61.16	20.54	60.11	20.99
	5.0	4.1	69.94	20.44	68.84	20.94	67.73	21.40	67.17	21.62	66.61	21.88	65.47	22.36
	7.0	6.0	79.94	22.88	78.40	23.34	76.87	23.79	76.10	24.00	75.33	24.24	73.79	24.09
	9.0	7.9	82.50	23.13	80.91	23.60	79.33	24.05	78.53	24.28	77.74	24.52	74.76	23.27
	11.0	9.8	85.06	23.39	83.42	23.83	81.79	24.31	80.97	24.56	80.15	24.44	74.76	22.16
13.0	11.8	87.61	23.57	85.93	24.08	84.25	24.56	83.40	24.64	82.22	23.85	74.76	20.73	
15.0	13.7	90.17	23.78	88.44	24.32	86.70	24.80	85.84	24.22	82.22	22.75	74.76	19.36	
18.0	16.6	94.01	24.38	92.20	24.90	89.70	23.49	85.98	21.63	82.22	19.86	74.76	16.50	
21.0	19.5	97.85	24.72	95.97	24.51	89.70	22.12	85.98	20.31	82.22	18.51	74.76	15.30	
24.0	22.4	101.68	25.08	97.18	23.46	89.70	20.30	85.98	18.55	82.22	16.94	74.76	14.13	
27.0	25.3	101.68	23.76	97.18	21.51	89.70	18.18	85.98	16.57	82.22	15.10	74.76	12.78	
30.0	28.1	104.81	23.20	97.18	19.72	89.70	16.28	85.98	14.81	82.22	13.47	74.76	11.55	
120%	-30.0	-30.5	46.47	15.63	45.57	16.20	44.68	16.73	44.23	17.03	43.79	17.25	42.89	17.81
	-25.0	-25.4	46.47	15.90	45.57	16.37	44.68	16.83	44.23	17.09	43.79	17.29	42.89	17.77
	-19.8	-20.0	46.47	16.17	45.57	16.55	44.68	16.94	44.23	17.15	43.79	17.34	42.89	17.73
	-18.8	-19.0	46.47	16.16	45.57	16.55	44.68	16.92	44.23	17.11	43.79	17.30	42.89	17.70
	-16.7	-17.0	46.47	16.17	45.57	16.53	45.06	17.06	44.66	17.25	44.26	17.43	43.46	17.84
	-13.7	-15.0	46.97	16.41	46.16	16.80	46.02	17.46	45.66	17.64	45.29	17.88	44.56	18.33
	-11.8	-13.0	48.06	16.71	47.32	17.12	46.57	17.52	46.19	17.75	45.82	17.96	45.07	18.39
	-9.8	-11.0	48.62	16.77	47.85	17.19	47.08	17.58	46.70	17.79	46.31	18.00	45.54	18.41
	-9.5	-10.0	48.89	16.71	48.11	17.14	47.33	17.52	46.94	17.72	46.55	17.93	45.76	18.34
	-8.5	-9.1	49.12	16.75	48.33	17.17	47.55	17.55	47.15	17.75	46.76	17.95	45.96	18.36
	-7.0	-7.6	49.49	16.77	48.69	17.18	47.89	17.57	47.49	17.76	47.09	17.96	46.28	18.37
	-5.0	-5.6	49.13	16.51	48.32	16.89	47.51	17.27	47.11	17.47	46.70	17.66	45.88	18.04
	-3.0	-3.7	50.91	16.76	50.08	17.14	49.23	17.51	48.81	17.70	48.39	17.90	47.54	18.28
	0.0	-0.7	55.24	17.55	54.33	17.96	53.42	18.36	52.96	18.57	52.50	18.75	51.59	19.16
	3.0	2.2	61.98	19.09	60.98	19.54	59.98	19.95	59.47	20.17	58.96	20.39	57.53	20.18
	5.0	4.1	67.48	20.35	66.41	20.82	65.32	21.31	64.78	21.54	64.23	21.75	62.10	20.80
	7.0	6.0	76.42	22.60	74.95	23.05	74.05	23.69	73.39	23.91	72.57	23.71	69.00	22.03
	9.0	7.9	78.87	22.87	77.35	23.34	76.46	23.99	75.69	23.99	74.32	23.22	69.00	20.67
	11.0	9.8	81.32	23.13	79.75	23.61	78.84	24.22	77.41	23.40	75.91	22.63	69.00	19.34
	13.0	11.8	83.76	23.37	82.77	24.02	80.54	23.67	79.36	22.83	75.91	21.43	69.00	18.00
15.0	13.7	86.21	23.64	85.22	24.30	82.80	23.19	79.36	21.73	75.91	20.02	69.00	16.73	
18.0	16.6	89.88	24.23	88.15	23.08	82.80	20.17	79.36	18.59	75.91	17.07	69.00	14.47	
21.0	19.5	93.54	23.88	89.70	22.21	82.80	18.85	79.36	17.26	75.91	15.84	69.00	13.33	
24.0	22.4	96.61	23.33	89.70	20.33	82.80	17.26	79.36	15.81	75.91	14.56	69.00	12.20	
27.0	25.3	96.61	21.32	89.70	18.24	82.80	15.36	79.36	14.22	75.91	13.18	69.00	11.05	
30.0	28.1	96.61	19.47	89.70	16.36	82.80	13.67	79.36	12.79	75.91	11.93	69.00	10.00	

**Abbreviations:**

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

**Notes:**

Shaded cells indicate rating condition.

Table continued on next page ...

# MDV8 ECO VRF 50Hz



Table 2-8.21: 22HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
110%	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	
	-30.0	-30.5	43.89	15.18	43.05	15.74	42.20	16.24	41.78	16.54	41.36	16.75	40.52	17.27
	-25.0	-25.4	43.89	15.43	43.05	15.90	42.20	16.35	41.78	16.58	41.36	16.77	40.52	17.22
	-19.8	-20.0	43.89	15.68	43.05	16.06	42.20	16.46	41.78	16.61	41.69	16.94	40.95	17.36
	-18.8	-19.0	43.89	15.70	43.05	16.05	42.58	16.57	42.20	16.76	41.83	16.98	41.08	17.39
	-16.7	-17.0	44.38	15.85	43.62	16.26	43.51	16.89	43.16	17.10	42.82	17.33	42.14	17.77
	-13.7	-15.0	45.44	16.31	44.73	16.73	44.03	17.15	43.67	17.36	43.32	17.58	42.62	18.00
	-11.8	-13.0	45.97	16.40	45.25	16.81	44.52	17.23	44.16	17.42	43.80	17.65	43.07	18.05
	-9.8	-11.0	46.47	16.50	45.73	16.89	44.99	17.27	44.61	17.47	44.24	17.67	43.49	18.08
	-9.5	-10.0	46.71	16.44	45.96	16.81	45.21	17.20	44.83	17.40	44.45	17.59	43.70	18.00
	-8.5	-9.1	46.92	16.48	46.16	16.84	45.40	17.23	45.02	17.43	44.64	17.62	43.87	18.03
	-7.0	-7.6	47.26	16.50	46.49	16.87	45.71	17.27	45.33	17.45	44.94	17.64	44.16	18.01
	-5.0	-5.6	46.87	16.24	46.09	16.61	45.31	16.96	44.92	17.16	44.53	17.32	43.75	17.71
	-3.0	-3.7	48.57	16.48	47.77	16.85	46.96	17.22	46.55	17.39	46.14	17.57	45.33	17.94
	0.0	-0.7	52.69	17.33	51.82	17.69	50.95	18.08	50.51	18.28	50.07	18.47	48.68	18.22
	3.0	2.2	59.17	18.86	58.21	19.30	57.24	19.72	56.75	19.93	56.01	19.59	53.98	18.54
	5.0	4.1	64.48	20.19	63.43	20.61	62.39	21.09	61.64	20.86	60.53	20.17	58.22	18.76
	7.0	6.0	72.96	22.38	71.69	22.87	70.31	23.02	69.29	22.35	68.03	21.64	63.26	19.08
	9.0	7.9	75.33	22.69	74.01	23.21	72.24	22.54	70.92	21.81	69.58	21.06	63.26	17.83
	11.0	9.8	77.70	23.02	76.28	23.35	73.86	21.96	72.74	21.28	69.58	19.73	63.26	16.61
	13.0	11.8	80.09	23.30	78.25	22.88	75.91	21.47	72.74	19.92	69.58	18.34	63.26	15.39
15.0	13.7	82.41	23.43	79.86	22.27	75.91	20.10	72.74	18.55	69.58	17.08	63.26	14.44	
18.0	16.6	84.90	21.99	82.22	19.92	75.91	17.09	72.74	15.72	69.58	14.69	63.26	12.67	
21.0	19.5	88.36	21.49	82.22	18.56	75.91	15.80	72.74	14.55	69.58	13.59	63.26	11.61	
24.0	22.4	88.56	19.80	82.22	17.05	75.91	14.61	72.74	13.41	69.58	12.49	63.26	10.48	
27.0	25.3	88.56	17.75	82.22	15.18	75.91	13.19	72.74	12.27	69.58	11.33	63.26	9.35	
30.0	28.1	88.56	15.91	82.22	13.51	75.91	11.91	72.74	11.23	69.58	10.28	63.26	8.35	
100%	-30.0	-30.5	43.63	15.63	42.79	16.11	41.95	16.63	41.53	16.89	41.11	17.15	40.27	17.64
	-25.0	-25.4	43.63	15.84	42.79	16.27	41.95	16.72	41.53	16.94	41.11	17.18	40.27	17.62
	-19.8	-20.0	43.63	16.05	42.79	16.43	41.95	16.81	41.53	17.00	41.44	17.35	40.70	17.79
	-18.8	-19.0	43.63	16.06	42.79	16.44	42.32	16.96	41.95	17.19	41.58	17.38	40.83	17.82
	-16.7	-17.0	44.11	16.25	43.35	16.63	43.24	17.29	42.90	17.53	42.57	17.76	41.89	18.20
	-13.7	-15.0	45.16	16.70	44.46	17.14	43.76	17.56	43.41	17.78	43.06	18.01	42.37	18.45
	-11.8	-13.0	45.69	16.83	44.97	17.24	44.26	17.65	43.89	17.85	43.54	18.07	42.82	18.51
	-9.8	-11.0	46.19	16.92	45.46	17.32	44.72	17.73	44.35	17.94	43.98	18.14	43.24	18.55
	-9.5	-10.0	46.43	16.87	45.68	17.24	44.94	17.64	44.56	17.86	44.19	18.06	43.44	18.47
	-8.5	-9.1	46.64	16.91	45.89	17.30	45.13	17.70	44.75	17.89	44.38	18.10	43.62	18.49
	-7.0	-7.6	46.97	16.95	46.21	17.32	45.44	17.72	45.06	17.92	44.67	18.10	43.90	18.50
	-5.0	-5.6	46.57	16.71	45.80	17.08	45.03	17.46	44.65	17.65	44.26	17.83	43.15	17.66
	-3.0	-3.7	48.25	17.00	47.45	17.36	46.65	17.72	46.25	17.92	45.85	18.12	44.36	17.37
	0.0	-0.7	52.35	17.88	51.48	18.29	50.61	18.68	50.09	18.66	49.25	18.43	47.50	17.00
	3.0	2.2	58.78	19.54	57.82	19.95	56.54	19.79	55.58	19.60	54.59	18.81	52.51	17.01
	5.0	4.1	64.03	20.88	63.00	21.35	61.07	20.39	59.98	20.00	58.03	18.77	56.04	16.97
	7.0	6.0	72.48	23.24	71.00	23.00	69.00	21.97	66.13	20.67	63.26	19.15	57.51	16.25
	9.0	7.9	74.83	23.60	72.63	22.50	69.00	20.84	66.13	19.36	63.26	17.89	57.51	15.10
	11.0	9.8	76.94	23.19	74.76	22.08	69.00	19.48	66.13	18.07	63.26	16.68	57.51	14.28
	13.0	11.8	78.65	22.59	74.76	20.94	69.00	18.10	66.13	16.76	63.26	15.40	57.51	13.34
	15.0	13.7	80.51	22.05	74.76	19.56	69.00	16.86	66.13	15.58	63.26	14.48	57.51	12.45
18.0	16.6	80.51	19.12	74.76	16.57	69.00	14.47	66.13	13.56	63.26	12.67	57.51	10.99	
21.0	19.5	80.51	17.87	74.76	15.30	69.00	13.36	66.13	12.45	63.26	11.56	57.51	9.88	
24.0	22.4	80.51	16.33	74.76	14.21	69.00	12.26	66.13	11.33	63.26	10.43	57.51	8.99	
27.0	25.3	80.51	14.57	74.76	12.83	69.00	11.14	66.13	10.21	63.26	9.31	57.51	8.16	
30.0	28.1	80.51	13.00	74.76	11.58	69.00	10.11	66.13	9.19	63.26	8.32	57.51	7.41	

**Abbreviations:**

- CR: Combination ratio
- TC: Total capacity (kW)
- PI: Power input (compressor + outdoor fan motor) (kW)

Notes:  
Shaded cells indicate rating condition.

Table continued on next page ...



Table 2-8.21: 22HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
90%	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
	-30.0	-30.5	39.27	14.53	38.51	14.99	37.76	15.49	37.38	15.70	37.00	15.99	36.25	16.44
	-25.0	-25.4	39.27	14.74	38.51	15.16	37.76	15.58	37.38	15.77	37.00	16.00	36.25	16.41
	-19.8	-20.0	39.84	15.17	39.81	15.84	39.20	16.27	38.90	16.49	38.60	16.71	37.99	17.16
	-18.8	-19.0	40.67	15.51	40.05	15.93	39.44	16.37	39.13	16.57	38.82	16.80	38.20	17.25
	-16.7	-17.0	41.16	15.68	40.52	16.10	39.88	16.51	39.57	16.73	39.25	16.94	38.61	17.36
	-13.7	-15.0	41.62	15.96	40.96	16.33	40.31	16.74	39.98	16.96	39.65	17.16	39.00	17.57
	-11.8	-13.0	42.06	16.05	41.39	16.44	40.71	16.82	40.37	17.02	40.04	17.21	39.36	17.63
	-9.8	-11.0	42.46	16.14	41.77	16.52	41.08	16.90	40.74	17.08	40.39	17.29	39.51	17.23
	-9.5	-10.0	42.65	16.09	41.95	16.45	41.26	16.85	40.91	17.04	40.56	17.22	39.51	16.75
	-8.5	-9.1	42.81	16.15	42.11	16.50	41.41	16.88	41.05	17.07	40.70	17.26	39.51	16.44
	-7.0	-7.6	43.08	16.18	42.36	16.55	41.65	16.92	41.29	17.12	40.89	17.16	39.51	15.90
	-5.0	-5.6	42.65	15.97	41.94	16.31	41.22	16.64	40.82	16.74	40.18	16.41	38.83	15.08
	-3.0	-3.7	44.18	16.25	43.44	16.57	42.66	16.84	42.00	16.51	41.33	16.14	39.92	14.77
	0.0	-0.7	47.96	17.13	47.15	17.51	45.81	17.15	45.08	16.51	44.33	15.81	42.75	14.39
	3.0	2.2	53.93	18.79	52.56	18.53	50.89	17.37	50.02	16.62	49.13	15.88	47.26	14.31
	5.0	4.1	58.67	19.79	56.86	19.16	54.96	17.60	53.98	16.77	52.22	15.74	50.44	14.33
	7.0	6.0	66.69	21.49	63.90	20.21	62.10	18.59	59.52	17.29	56.93	15.99	51.76	13.85
	9.0	7.9	67.45	20.77	65.37	19.38	62.10	17.38	59.52	16.08	56.93	14.95	51.76	12.94
	11.0	9.8	69.25	20.30	67.28	18.63	62.10	16.14	59.52	15.00	56.93	14.07	51.76	12.18
13.0	11.8	70.78	19.32	67.28	17.30	62.10	15.00	59.52	14.07	56.93	13.23	51.76	11.33	
15.0	13.7	72.46	18.45	67.28	16.08	62.10	14.07	59.52	13.23	56.93	12.36	51.76	10.44	
18.0	16.6	72.46	15.57	67.28	13.89	62.10	12.31	59.52	11.56	56.93	10.83	51.76	9.52	
21.0	19.5	72.46	14.51	67.28	12.75	62.10	11.27	59.52	10.40	56.93	9.70	51.76	8.71	
24.0	22.4	72.46	13.41	67.28	11.64	62.10	10.15	59.52	9.35	56.93	8.86	51.76	7.93	
27.0	25.3	72.46	12.14	67.28	10.50	62.10	9.09	59.52	8.46	56.93	8.02	51.76	7.11	
30.0	28.1	72.46	11.00	67.28	9.48	62.10	8.15	59.52	7.66	56.93	7.26	51.76	6.36	
80%	-30.0	-30.5	34.90	13.44	34.23	13.89	33.56	14.32	33.23	14.54	32.89	14.78	32.22	14.36
	-25.0	-25.4	35.33	13.80	34.73	14.23	34.71	14.90	34.46	15.14	34.20	15.39	33.27	15.23
	-19.8	-20.0	36.93	14.64	36.36	15.04	35.79	15.44	35.51	15.66	35.22	15.88	34.65	16.30
	-18.8	-19.0	37.14	14.74	36.55	15.13	35.98	15.54	35.69	15.73	35.40	15.94	34.82	16.38
	-16.7	-17.0	37.52	14.90	36.93	15.28	36.33	15.68	36.03	15.86	35.74	16.06	35.11	16.41
	-13.7	-15.0	37.88	15.14	37.27	15.52	36.66	15.91	36.35	16.09	36.05	16.29	35.11	16.11
	-11.8	-13.0	38.21	15.26	37.59	15.62	36.97	15.98	36.65	16.18	36.34	16.35	35.11	15.66
	-9.8	-11.0	38.53	15.35	37.89	15.69	37.25	16.05	36.93	16.24	36.34	15.94	35.11	15.09
	-9.5	-10.0	38.68	15.30	38.03	15.66	37.39	16.01	36.93	15.83	36.34	15.44	35.11	14.54
	-8.5	-9.1	38.81	15.35	38.16	15.70	37.51	16.04	36.93	15.51	36.34	15.04	35.11	14.10
	-7.0	-7.6	39.02	15.41	38.36	15.74	37.51	15.63	36.93	15.06	36.34	14.59	35.11	13.59
	-5.0	-5.6	38.58	15.18	37.92	15.52	36.85	14.89	36.29	14.34	35.71	13.82	34.52	12.82
	-3.0	-3.7	39.96	15.47	39.05	15.32	37.92	14.66	37.34	14.07	36.74	13.52	35.49	12.41
	0.0	-0.7	43.19	15.88	41.98	15.40	40.72	14.26	40.07	13.69	39.40	13.10	38.00	12.00
	3.0	2.2	48.14	16.79	46.72	15.58	45.23	14.30	44.46	13.68	43.67	13.03	42.01	12.16
	5.0	4.1	52.15	17.08	50.54	15.78	48.86	14.45	47.98	13.77	46.42	13.10	44.83	12.26
	7.0	6.0	59.28	18.19	56.80	16.54	55.20	15.16	52.91	14.30	50.60	13.41	46.00	11.78
	9.0	7.9	59.96	17.17	58.11	15.78	55.21	14.30	52.91	13.41	50.60	12.49	46.00	10.66
	11.0	9.8	61.55	16.47	59.80	15.09	55.21	13.41	52.91	12.61	50.60	11.78	46.00	9.99
	13.0	11.8	62.92	15.60	59.80	14.15	55.21	12.56	52.91	11.72	50.60	10.92	46.00	9.37
15.0	13.7	64.40	14.84	59.80	13.32	55.21	11.68	52.91	10.84	50.60	10.04	46.00	8.91	
18.0	16.6	64.40	12.93	59.80	11.61	55.21	10.28	52.91	9.70	50.60	9.25	46.00	8.22	
21.0	19.5	64.40	11.90	59.80	10.48	55.21	9.31	52.91	8.89	50.60	8.46	46.00	7.58	
24.0	22.4	64.40	10.80	59.80	9.37	55.21	8.49	52.91	8.07	50.60	7.67	46.00	6.94	
27.0	25.3	64.40	9.65	59.80	8.47	55.21	7.66	52.91	7.29	50.60	6.89	46.00	6.01	
30.0	28.1	64.40	8.62	59.80	7.67	55.21	6.91	52.91	6.57	50.60	6.18	46.00	5.20	

## Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

# MDV8 ECO VRF 50Hz



Table 2-8.21: 22HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
70%	-30.0	-30.5	30.92	12.49	30.86	13.08	30.42	13.63	30.12	13.68	29.05	12.97	28.19	12.47
	-25.0	-25.4	32.31	13.27	31.82	13.68	31.34	14.13	31.06	14.27	30.57	14.07	29.48	13.49
	-19.8	-20.0	33.20	13.86	32.68	14.24	32.15	14.60	31.89	14.82	31.63	15.00	30.73	14.53
	-18.8	-19.0	33.35	13.94	32.82	14.29	32.29	14.69	32.02	14.89	31.76	15.06	30.73	14.27
	-16.7	-17.0	33.64	14.11	33.10	14.44	32.55	14.82	32.28	15.02	31.80	14.75	30.73	13.87
	-13.7	-15.0	33.91	14.35	33.36	14.69	32.80	15.06	32.32	14.78	31.80	14.51	30.73	13.55
	-11.8	-13.0	34.17	14.44	33.60	14.77	32.82	14.66	32.32	14.40	31.80	14.07	30.73	13.06
	-9.8	-11.0	34.41	14.52	33.80	14.73	32.82	14.28	32.32	13.93	31.80	13.45	30.73	12.45
	-9.5	-10.0	34.53	14.49	33.80	14.36	32.82	13.82	32.32	13.44	31.80	12.96	30.73	11.94
	-8.5	-9.1	34.63	14.55	33.80	14.07	32.82	13.44	32.32	13.04	31.80	12.53	30.73	11.47
	-7.0	-7.6	34.74	14.43	33.80	13.70	32.82	13.01	32.32	12.59	31.80	12.06	30.73	11.01
	-5.0	-5.6	34.11	13.78	33.19	13.03	32.24	12.30	31.75	11.88	31.25	11.35	30.20	10.39
	-3.0	-3.7	35.13	13.59	34.17	12.79	33.18	11.94	32.67	11.46	32.15	11.00	31.05	10.10
	0.0	-0.7	37.79	13.38	36.73	12.46	35.63	11.51	35.06	11.08	34.48	10.75	33.25	10.06
	3.0	2.2	42.12	13.48	40.88	12.48	39.58	11.62	38.90	11.27	38.21	10.94	36.76	10.24
	5.0	4.1	45.63	13.62	44.22	12.57	42.75	11.81	41.98	11.50	40.62	10.89	39.23	10.18
	7.0	6.0	51.87	14.42	49.70	13.34	48.30	12.56	46.28	11.87	44.28	11.03	40.26	9.52
	9.0	7.9	52.46	13.65	50.84	12.81	48.30	11.54	46.28	10.75	44.28	10.08	40.26	8.97
	11.0	9.8	53.86	13.20	52.33	12.35	48.30	10.71	46.28	10.04	44.28	9.47	40.26	8.49
	13.0	11.8	55.05	12.63	52.33	11.47	48.30	9.95	46.28	9.44	44.28	8.95	40.26	8.00
	15.0	13.7	56.36	12.05	52.33	10.59	48.30	9.44	46.28	8.93	44.28	8.46	40.26	7.57
	18.0	16.6	56.36	10.54	52.33	9.53	48.30	8.73	46.28	8.25	44.28	7.79	40.26	6.94
	21.0	19.5	56.36	9.48	52.33	8.71	48.30	7.97	46.28	7.57	44.28	7.11	40.26	6.32
24.0	22.4	56.36	8.59	52.33	7.91	48.30	7.23	46.28	6.92	44.28	6.46	40.26	5.67	
27.0	25.3	56.36	7.79	52.33	7.13	48.30	6.37	46.28	5.99	44.28	5.65	40.26	4.97	
30.0	28.1	56.36	7.06	52.33	6.43	48.30	5.61	46.28	5.19	44.28	4.93	40.26	4.36	
60%	-30.0	-30.5	27.85	11.94	27.44	12.38	26.41	11.71	26.02	11.63	25.59	11.53	24.44	11.18
	-25.0	-25.4	28.58	12.50	28.14	12.91	27.34	12.54	26.92	12.33	26.49	12.11	25.59	11.62
	-19.8	-20.0	29.22	13.04	28.75	13.41	28.13	13.35	27.70	13.01	27.26	12.64	26.34	11.88
	-18.8	-19.0	29.33	13.12	28.86	13.48	28.13	13.13	27.70	12.75	27.26	12.40	26.34	11.63
	-16.7	-17.0	29.55	13.28	28.97	13.35	28.13	12.83	27.70	12.45	27.26	12.03	26.34	11.22
	-13.7	-15.0	29.75	13.51	28.97	13.11	28.13	12.59	27.70	12.17	27.26	11.73	26.34	10.86
	-11.8	-13.0	29.77	13.20	28.97	12.76	28.13	12.09	27.70	11.72	27.26	11.29	26.34	10.40
	-9.8	-11.0	29.77	12.85	28.97	12.30	28.13	11.53	27.70	11.16	27.26	10.74	26.34	10.00
	-9.5	-10.0	29.77	12.44	28.97	11.89	28.13	11.03	27.70	10.70	27.26	10.27	26.34	9.62
	-8.5	-9.1	29.77	12.10	28.97	11.49	28.13	10.64	27.70	10.27	27.26	9.93	26.34	9.43
	-7.0	-7.6	29.77	11.71	28.97	11.08	28.13	10.18	27.70	9.88	27.26	9.59	26.34	9.11
	-5.0	-5.6	29.24	11.10	28.45	10.45	27.63	9.59	27.21	9.32	26.78	9.05	25.89	8.58
	-3.0	-3.7	30.11	10.79	29.29	10.07	28.44	9.34	28.00	9.07	27.55	8.78	26.62	8.33
	0.0	-0.7	32.39	10.42	31.49	9.83	30.54	9.35	30.05	9.05	29.55	8.73	28.50	8.23
	3.0	2.2	36.10	10.55	35.04	10.03	33.92	9.52	33.35	9.24	32.75	8.92	31.51	8.44
	5.0	4.1	39.11	10.80	37.91	10.22	36.64	9.60	35.98	9.26	34.82	8.87	33.62	8.53
	7.0	6.0	44.46	11.55	42.60	10.75	41.40	9.74	39.67	9.31	37.96	8.89	37.04	8.64
	9.0	7.9	44.97	10.75	43.58	9.89	41.40	9.20	39.67	8.79	37.96	8.35	37.04	8.08
	11.0	9.8	46.17	10.27	44.86	9.53	41.40	8.70	42.66	8.92	37.96	7.91	37.04	7.64
	13.0	11.8	47.19	9.66	44.86	8.98	44.54	8.87	42.66	8.40	37.96	7.44	37.04	7.19
	15.0	13.7	48.30	9.31	44.86	8.56	44.54	8.31	42.66	7.91	37.96	7.02	37.04	6.79
	18.0	16.6	48.30	8.62	44.86	7.82	44.54	7.65	42.66	7.27	37.96	6.44	37.04	6.23
	21.0	19.5	48.30	7.86	44.86	7.18	44.54	6.98	42.66	6.67	37.96	5.83	37.04	5.62
24.0	22.4	52.05	7.68	44.86	6.54	44.54	6.35	42.66	5.96	37.96	5.24	37.04	5.01	
27.0	25.3	52.05	6.75	44.86	5.66	44.54	5.50	42.66	5.22	37.96	4.61	37.04	4.42	
30.0	28.1	52.05	5.93	44.86	4.90	44.54	4.76	42.66	4.57	37.96	4.05	37.04	3.91	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

Table2-8.21:22HP heating capacity(continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
50%	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
	-30.0	-30.5	23.88	10.88	23.25	10.70	22.60	10.50	22.25	10.39	21.90	10.21	21.19	9.88
	-25.0	-25.4	24.38	11.24	23.72	10.89	23.04	10.52	22.69	10.32	22.33	10.08	21.59	9.65
	-19.8	-20.0	24.81	11.58	24.14	11.06	23.44	10.51	23.08	10.22	22.72	9.93	21.95	9.42
	-18.8	-19.0	24.81	11.39	24.14	10.85	23.44	10.30	23.08	10.01	22.72	9.71	21.95	9.29
	-16.7	-17.0	24.81	11.13	24.14	10.58	23.44	9.98	23.08	9.62	22.72	9.34	21.95	8.99
	-13.7	-15.0	24.81	10.91	24.14	10.32	23.44	9.66	23.08	9.31	22.72	9.07	21.95	8.71
	-11.8	-13.0	24.81	10.49	24.14	9.92	23.44	9.24	23.08	8.96	22.72	8.71	21.95	8.37
	-9.8	-11.0	24.81	9.99	24.14	9.40	23.44	8.90	23.08	8.62	22.72	8.36	21.95	7.99
	-9.5	-10.0	24.81	9.58	24.14	8.97	23.44	8.55	23.08	8.33	22.72	8.14	21.95	7.77
	-8.5	-9.1	24.81	9.21	24.14	8.67	23.44	8.34	23.08	8.16	22.72	7.98	21.95	7.62
	-7.0	-7.6	24.81	8.81	24.14	8.40	23.44	8.07	23.08	7.89	22.72	7.72	21.95	7.38
	-5.0	-5.6	24.36	8.31	23.71	7.89	23.03	7.56	22.68	7.39	22.32	7.24	21.57	7.00
	-3.0	-3.7	25.09	8.10	24.41	7.68	23.70	7.35	23.33	7.18	22.96	7.07	22.18	6.88
	0.0	-0.7	27.00	8.13	26.24	7.67	25.45	7.29	25.04	7.17	24.63	7.06	23.75	6.83
	3.0	2.2	30.09	8.31	29.20	7.87	28.27	7.53	27.79	7.38	27.29	7.24	26.26	7.01
	5.0	4.1	32.59	8.41	31.59	7.97	30.54	7.66	29.99	7.56	29.01	7.33	28.02	6.91
	7.0	6.0	37.05	8.59	35.50	8.21	34.50	7.97	33.06	7.61	31.63	7.29	28.76	6.65
	9.0	7.9	37.47	8.19	36.32	7.88	34.51	7.43	33.06	7.12	31.63	6.78	28.76	6.14
	11.0	9.8	38.47	7.94	37.37	7.68	34.51	7.04	33.06	6.72	31.63	6.41	28.76	5.83
13.0	11.8	39.32	7.64	37.37	7.24	34.51	6.62	33.06	6.33	31.63	6.05	28.76	5.48	
15.0	13.7	40.26	7.42	37.37	6.81	34.51	6.26	33.06	5.99	31.63	5.74	28.76	5.22	
18.0	16.6	40.26	6.76	37.37	6.23	34.51	5.71	33.06	5.45	31.63	5.20	28.76	4.74	
21.0	19.5	40.26	6.15	37.37	5.63	34.51	5.15	33.06	4.91	31.63	4.68	28.76	4.25	
24.0	22.4	40.26	5.55	37.37	5.04	34.51	4.59	33.06	4.37	31.63	4.13	28.76	3.74	
27.0	25.3	40.26	4.84	37.37	4.43	34.51	4.04	33.06	3.81	31.63	3.63	28.76	3.28	
30.0	28.1	40.26	4.22	37.37	3.90	34.51	3.55	33.06	3.33	31.63	3.18	28.76	2.88	

**Abbreviations:**

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

**Notes:**

Shaded cells indicate rating condition.

Table 2-8.22: 24HP heating capacity

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
130%	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	
	-30.0	-30.5	52.83	17.62	51.81	18.23	50.80	18.84	50.29	19.13	49.78	19.47	48.77	20.07
	-25.0	-25.4	52.83	17.91	51.81	18.45	50.80	18.97	50.29	19.23	49.78	19.50	48.77	20.03
	-19.8	-20.0	52.83	18.21	51.81	18.67	50.80	19.11	50.29	19.32	49.78	19.54	48.77	20.00
	-18.8	-19.0	52.83	18.23	51.81	18.65	50.80	19.10	50.29	19.32	49.78	19.53	48.77	19.97
	-16.7	-17.0	52.83	18.21	51.81	18.64	50.80	19.04	50.29	19.27	49.78	19.47	49.16	20.06
	-13.7	-15.0	52.83	18.28	52.21	18.85	51.30	19.29	50.84	19.50	50.39	19.74	49.47	20.19
	-11.8	-13.0	53.47	18.42	52.55	18.82	52.45	19.58	52.03	19.80	51.61	20.05	50.77	20.53
	-9.8	-11.0	54.77	18.72	53.91	19.17	53.05	19.67	52.62	19.87	52.19	20.10	51.32	20.60
	-9.5	-10.0	55.08	18.67	54.21	19.13	53.34	19.56	52.90	19.81	52.47	20.03	51.59	20.48
	-8.5	-9.1	55.36	18.70	54.48	19.17	53.59	19.62	53.15	19.85	52.71	20.07	51.82	20.51
	-7.0	-7.6	55.79	18.75	54.90	19.18	54.00	19.62	53.55	19.83	53.10	20.04	52.20	20.52
	-5.0	-5.6	55.42	18.43	54.51	18.86	53.61	19.27	53.15	19.51	52.70	19.74	51.78	20.14
	-3.0	-3.7	57.43	18.69	56.49	19.12	55.55	19.55	55.08	19.77	54.60	19.96	53.65	20.41
	0.0	-0.7	62.30	19.56	61.28	20.00	60.26	20.47	59.75	20.70	59.24	20.91	58.21	21.37
	3.0	2.2	69.87	21.22	68.75	21.70	67.62	22.21	67.05	22.46	66.48	22.68	65.34	23.19
	5.0	4.1	76.03	22.58	74.82	23.13	73.61	23.64	73.01	23.88	72.40	24.17	71.17	24.70
	7.0	6.0	86.89	25.27	85.22	25.77	83.55	26.27	82.71	26.51	81.88	26.78	80.21	26.61
	9.0	7.9	89.67	25.55	87.95	26.07	86.22	26.57	85.36	26.81	84.50	27.08	81.26	25.70
	11.0	9.8	92.45	25.83	90.68	26.33	88.90	26.85	88.01	27.13	87.12	27.00	81.26	24.47
13.0	11.8	95.23	26.04	93.40	26.60	91.57	27.13	90.66	27.21	89.37	26.34	81.26	22.90	
15.0	13.7	98.01	26.26	96.13	26.86	94.24	27.40	93.30	26.75	89.37	25.13	81.26	21.39	
18.0	16.6	102.18	26.93	100.22	27.50	97.50	25.94	93.46	23.89	89.37	21.93	81.26	18.22	
21.0	19.5	106.36	27.31	104.31	27.07	97.50	24.43	93.46	22.43	89.37	20.45	81.26	16.89	
24.0	22.4	110.53	27.70	105.63	25.91	97.50	22.42	93.46	20.49	89.37	18.71	81.26	15.61	
27.0	25.3	110.53	26.24	105.63	23.76	97.50	20.08	93.46	18.31	89.37	16.68	81.26	14.11	
30.0	28.1	113.92	25.63	105.63	21.78	97.50	17.98	93.46	16.36	89.37	14.87	81.26	12.76	
120%	-30.0	-30.5	50.51	17.26	49.54	17.89	48.56	18.48	48.08	18.81	47.59	19.05	46.62	19.67
	-25.0	-25.4	50.51	17.56	49.54	18.08	48.56	18.59	48.08	18.87	47.59	19.10	46.62	19.63
	-19.8	-20.0	50.51	17.86	49.54	18.28	48.56	18.71	48.08	18.94	47.59	19.16	46.62	19.59
	-18.8	-19.0	50.51	17.85	49.54	18.28	48.56	18.69	48.08	18.90	47.59	19.11	46.62	19.55
	-16.7	-17.0	50.51	17.86	49.54	18.26	48.98	18.84	48.55	19.05	48.11	19.25	47.24	19.71
	-13.7	-15.0	51.06	18.13	50.17	18.56	50.03	19.28	49.63	19.48	49.23	19.74	48.44	20.25
	-11.8	-13.0	52.24	18.45	51.43	18.91	50.62	19.35	50.21	19.61	49.80	19.84	48.98	20.31
	-9.8	-11.0	52.85	18.53	52.01	18.99	51.18	19.42	50.76	19.65	50.34	19.88	49.50	20.34
	-9.5	-10.0	53.14	18.45	52.29	18.93	51.45	19.35	51.02	19.57	50.59	19.80	49.74	20.26
	-8.5	-9.1	53.39	18.50	52.54	18.96	51.68	19.38	51.25	19.60	50.82	19.82	49.96	20.28
	-7.0	-7.6	53.80	18.52	52.93	18.98	52.06	19.41	51.62	19.62	51.18	19.84	50.30	20.29
	-5.0	-5.6	53.40	18.24	52.52	18.66	51.64	19.07	51.20	19.30	50.76	19.51	49.87	19.93
	-3.0	-3.7	55.34	18.51	54.43	18.93	53.52	19.35	53.06	19.55	52.60	19.77	51.68	20.19
	0.0	-0.7	60.04	19.38	59.06	19.84	58.07	20.28	57.57	20.51	57.07	20.71	56.07	21.17
	3.0	2.2	67.37	21.08	66.28	21.59	65.19	22.04	64.64	22.28	64.09	22.52	62.53	22.30
	5.0	4.1	73.35	22.48	72.18	23.00	71.00	23.53	70.41	23.79	69.82	24.03	67.50	22.97
	7.0	6.0	83.07	24.96	81.47	25.46	80.49	26.17	79.77	26.41	78.88	26.19	75.00	24.33
	9.0	7.9	85.73	25.26	84.08	25.78	83.11	26.50	82.27	26.50	80.78	25.65	75.00	22.83
	11.0	9.8	88.39	25.55	86.69	26.08	85.70	26.75	84.14	25.85	82.51	25.00	75.00	21.36
	13.0	11.8	91.04	25.82	89.96	26.53	87.54	26.15	86.26	25.21	82.51	23.67	75.00	19.88
15.0	13.7	93.70	26.12	92.63	26.85	90.00	25.61	86.26	24.00	82.51	22.12	75.00	18.48	
18.0	16.6	97.69	26.76	95.81	25.49	90.00	22.27	86.26	20.53	82.51	18.85	75.00	15.98	
21.0	19.5	101.68	26.38	97.50	24.53	90.00	20.82	86.26	19.06	82.51	17.49	75.00	14.73	
24.0	22.4	105.01	25.77	97.50	22.46	90.00	19.06	86.26	17.47	82.51	16.08	75.00	13.47	
27.0	25.3	105.01	23.54	97.50	20.15	90.00	16.97	86.26	15.71	82.51	14.55	75.00	12.20	
30.0	28.1	105.01	21.51	97.50	18.07	90.00	15.10	86.26	14.13	82.51	13.17	75.00	11.05	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

Table2-8.22:24HP heating capacity(continued)

CR	Outdoor air temp.		Indoor air temp. °C DB												
			16.0		18.0		20.0		21.0		22.0		24.0		
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	
110%	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
	-30.0	-30.5	47.71	16.77	46.79	17.39	45.87	17.94	45.41	18.27	44.96	18.50	44.04	19.08	
	-25.0	-25.4	47.71	17.04	46.79	17.56	45.87	18.06	45.41	18.31	44.96	18.53	44.04	19.03	
	-19.8	-20.0	47.71	17.32	46.79	17.74	45.87	18.18	45.41	18.35	45.32	18.71	44.51	19.18	
	-18.8	-19.0	47.71	17.34	46.79	17.73	46.28	18.30	45.87	18.51	45.46	18.76	44.65	19.21	
	-16.7	-17.0	48.24	17.51	47.41	17.96	47.29	18.66	46.92	18.89	46.55	19.14	45.81	19.63	
	-13.7	-15.0	49.39	18.02	48.62	18.47	47.86	18.95	47.47	19.17	47.09	19.41	46.32	19.88	
	-11.8	-13.0	49.97	18.11	49.18	18.57	48.39	19.03	48.00	19.24	47.60	19.49	46.81	19.94	
	-9.8	-11.0	50.51	18.22	49.70	18.65	48.90	19.08	48.49	19.30	48.09	19.51	47.27	19.97	
	-9.5	-10.0	50.77	18.16	49.96	18.57	49.14	19.00	48.73	19.22	48.32	19.43	47.49	19.89	
	-8.5	-9.1	51.00	18.20	50.18	18.60	49.35	19.03	48.94	19.25	48.52	19.46	47.69	19.91	
	-7.0	-7.6	51.37	18.23	50.53	18.63	49.69	19.07	49.27	19.27	48.85	19.48	48.00	19.90	
	-5.0	-5.6	50.95	17.94	50.10	18.34	49.26	18.73	48.83	18.95	48.41	19.13	47.55	19.56	
	-3.0	-3.7	52.80	18.21	51.92	18.61	51.04	19.02	50.60	19.21	50.16	19.41	49.27	19.81	
	0.0	-0.7	57.27	19.14	56.33	19.54	55.38	19.97	54.90	20.19	54.42	20.40	52.91	20.13	
	3.0	2.2	64.31	20.83	63.27	21.32	62.21	21.78	61.68	22.01	60.88	21.64	58.67	20.48	
	5.0	4.1	70.08	22.30	68.95	22.76	67.81	23.30	67.00	23.05	65.80	22.28	63.28	20.72	
	7.0	6.0	79.31	24.73	77.92	25.26	76.42	25.43	75.31	24.68	73.94	23.90	68.76	21.08	
	9.0	7.9	81.88	25.06	80.45	25.64	78.52	24.89	77.09	24.10	75.63	23.26	68.76	19.69	
	11.0	9.8	84.45	25.42	82.91	25.79	80.28	24.25	79.07	23.50	75.63	21.79	68.76	18.35	
13.0	11.8	87.05	25.73	85.06	25.27	82.51	23.72	79.07	22.00	75.63	20.26	68.76	16.99		
15.0	13.7	89.58	25.88	86.81	24.60	82.51	22.20	79.07	20.49	75.63	18.86	68.76	15.95		
18.0	16.6	92.28	24.29	89.37	22.00	82.51	18.88	79.07	17.37	75.63	16.22	68.76	14.00		
21.0	19.5	96.04	23.73	89.37	20.50	82.51	17.45	79.07	16.07	75.63	15.01	68.76	12.83		
24.0	22.4	96.26	21.87	89.37	18.84	82.51	16.14	79.07	14.81	75.63	13.80	68.76	11.57		
27.0	25.3	96.26	19.61	89.37	16.77	82.51	14.57	79.07	13.56	75.63	12.51	68.76	10.33		
30.0	28.1	96.26	17.57	89.37	14.92	82.51	13.15	79.07	12.41	75.63	11.35	68.76	9.22		
100%	-30.0	-30.5	47.42	17.27	46.51	17.80	45.60	18.37	45.14	18.65	44.69	18.94	43.78	19.48	
	-25.0	-25.4	47.42	17.49	46.51	17.97	45.60	18.47	45.14	18.72	44.69	18.98	43.78	19.46	
	-19.8	-20.0	47.42	17.72	46.51	18.15	45.60	18.57	45.14	18.78	45.04	19.16	44.24	19.65	
	-18.8	-19.0	47.42	17.74	46.51	18.15	46.00	18.74	45.60	18.99	45.19	19.20	44.38	19.68	
	-16.7	-17.0	47.95	17.95	47.12	18.37	47.00	19.10	46.63	19.36	46.27	19.61	45.53	20.11	
	-13.7	-15.0	49.08	18.45	48.33	18.93	47.57	19.40	47.19	19.64	46.81	19.89	46.05	20.38	
	-11.8	-13.0	49.66	18.59	48.88	19.05	48.10	19.49	47.71	19.71	47.32	19.96	46.54	20.44	
	-9.8	-11.0	50.21	18.69	49.41	19.13	48.60	19.58	48.20	19.81	47.80	20.04	47.00	20.49	
	-9.5	-10.0	50.46	18.64	49.66	19.05	48.85	19.48	48.44	19.73	48.03	19.95	47.22	20.40	
	-8.5	-9.1	50.69	18.68	49.88	19.10	49.06	19.55	48.64	19.76	48.23	19.99	47.41	20.42	
	-7.0	-7.6	51.05	18.72	50.23	19.13	49.39	19.57	48.98	19.79	48.56	20.00	47.71	20.43	
	-5.0	-5.6	50.62	18.46	49.79	18.86	48.95	19.29	48.53	19.50	48.11	19.69	46.90	19.50	
	-3.0	-3.7	52.45	18.78	51.58	19.18	50.71	19.57	50.27	19.79	49.83	20.02	48.22	19.18	
	0.0	-0.7	56.90	19.75	55.96	20.20	55.01	20.63	54.44	20.61	53.53	20.35	51.63	18.78	
	3.0	2.2	63.89	21.58	62.85	22.03	61.46	21.85	60.41	21.65	59.34	20.77	57.08	18.79	
	5.0	4.1	69.60	23.06	68.48	23.58	66.38	22.52	65.19	22.09	63.07	20.73	60.91	18.74	
	7.0	6.0	78.78	25.67	77.17	25.41	75.00	24.27	71.88	22.83	68.76	21.15	62.51	17.95	
	9.0	7.9	81.34	26.07	78.95	24.86	75.00	23.02	71.88	21.39	68.76	19.76	62.51	16.68	
	11.0	9.8	83.63	25.61	81.26	24.39	75.00	21.52	71.88	19.96	68.76	18.42	62.51	15.77	
	13.0	11.8	85.49	24.95	81.26	23.13	75.00	19.99	71.88	18.51	68.76	17.01	62.51	14.74	
15.0	13.7	87.51	24.36	81.26	21.60	75.00	18.62	71.88	17.21	68.76	16.00	62.51	13.76		
18.0	16.6	87.51	21.12	81.26	18.31	75.00	15.98	71.88	14.98	68.76	14.00	62.51	12.14		
21.0	19.5	87.51	19.73	81.26	16.89	75.00	14.75	71.88	13.76	68.76	12.77	62.51	10.92		
24.0	22.4	87.51	18.04	81.26	15.70	75.00	13.54	71.88	12.51	68.76	11.52	62.51	9.93		
27.0	25.3	87.51	16.10	81.26	14.17	75.00	12.30	71.88	11.27	68.76	10.29	62.51	9.02		
30.0	28.1	87.51	14.36	81.26	12.79	75.00	11.17	71.88	10.15	68.76	9.19	62.51	8.19		

Abbreviations:  
 CR: Combination ratio  
 TC: Total capacity (kW)  
 PI: Power input (compressor + outdoor fan motor) (kW)  
 Notes:  
 Shaded cells indicate rating condition.

Table continued on next page ...

# MDV8 ECO VRF 50Hz



Table 2-8.22: 24HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
90%	-30.0	-30.5	42.68	16.05	41.86	16.56	41.04	17.10	40.63	17.34	40.22	17.66	39.40	18.16
	-25.0	-25.4	42.68	16.28	41.86	16.74	41.04	17.20	40.63	17.42	40.22	17.68	39.40	18.12
	-19.8	-20.0	43.31	16.76	43.27	17.50	42.61	17.97	42.28	18.22	41.95	18.46	41.29	18.95
	-18.8	-19.0	44.21	17.13	43.54	17.59	42.87	18.08	42.53	18.31	42.20	18.55	41.52	19.05
	-16.7	-17.0	44.74	17.32	44.05	17.78	43.35	18.24	43.01	18.48	42.66	18.72	41.96	19.18
	-13.7	-15.0	45.24	17.63	44.53	18.04	43.81	18.49	43.46	18.73	43.10	18.95	42.39	19.41
	-11.8	-13.0	45.72	17.73	44.98	18.16	44.25	18.58	43.88	18.80	43.52	19.01	42.78	19.48
	-9.8	-11.0	46.15	17.83	45.40	18.25	44.65	18.67	44.28	18.87	43.90	19.10	42.94	19.03
	-9.5	-10.0	46.36	17.77	45.60	18.17	44.84	18.61	44.46	18.82	44.08	19.02	42.94	18.50
	-8.5	-9.1	46.54	17.83	45.77	18.23	45.01	18.65	44.62	18.85	44.24	19.07	42.94	18.16
	-7.0	-7.6	46.82	17.88	46.05	18.28	45.27	18.69	44.88	18.91	44.44	18.96	42.94	17.57
	-5.0	-5.6	46.36	17.63	45.59	18.02	44.81	18.38	44.37	18.49	43.67	18.13	42.21	16.66
	-3.0	-3.7	48.03	17.95	47.22	18.31	46.37	18.60	45.66	18.24	44.92	17.83	43.40	16.31
	0.0	-0.7	52.13	18.92	51.25	19.34	49.79	18.95	49.00	18.23	48.18	17.46	46.47	15.90
	3.0	2.2	58.62	20.76	57.13	20.47	55.31	19.19	54.37	18.36	53.40	17.54	51.37	15.80
	5.0	4.1	63.77	21.86	61.80	21.16	59.74	19.44	58.67	18.52	56.77	17.38	54.82	15.82
	7.0	6.0	72.49	23.73	69.45	22.32	67.50	20.53	64.70	19.09	61.88	17.67	56.26	15.30
	9.0	7.9	73.32	22.94	71.05	21.41	67.50	19.19	64.70	17.77	61.88	16.51	56.26	14.30
	11.0	9.8	75.27	22.42	73.13	20.58	67.50	17.82	64.70	16.57	61.88	15.54	56.26	13.46
	13.0	11.8	76.94	21.34	73.13	19.11	67.50	16.57	64.70	15.54	61.88	14.61	56.26	12.51
15.0	13.7	78.76	20.38	73.13	17.77	67.50	15.54	64.70	14.61	61.88	13.66	56.26	11.53	
18.0	16.6	78.76	17.19	73.13	15.34	67.50	13.60	64.70	12.77	61.88	11.96	56.26	10.52	
21.0	19.5	78.76	16.02	73.13	14.08	67.50	12.44	64.70	11.49	61.88	10.72	56.26	9.62	
24.0	22.4	78.76	14.81	73.13	12.86	67.50	11.22	64.70	10.33	61.88	9.79	56.26	8.76	
27.0	25.3	78.76	13.41	73.13	11.60	67.50	10.05	64.70	9.35	61.88	8.86	56.26	7.85	
30.0	28.1	78.76	12.15	73.13	10.47	67.50	9.00	64.70	8.46	61.88	8.02	56.26	7.03	
80%	-30.0	-30.5	37.94	14.85	37.21	15.34	36.48	15.82	36.12	16.06	35.75	16.32	35.02	15.86
	-25.0	-25.4	38.40	15.25	37.75	15.72	37.73	16.45	37.45	16.72	37.17	17.00	36.16	16.83
	-19.8	-20.0	40.14	16.17	39.52	16.62	38.90	17.06	38.59	17.30	38.29	17.54	37.67	18.01
	-18.8	-19.0	40.37	16.28	39.73	16.71	39.10	17.16	38.79	17.37	38.48	17.60	37.85	18.09
	-16.7	-17.0	40.78	16.46	40.14	16.88	39.49	17.32	39.17	17.52	38.85	17.73	38.17	18.13
	-13.7	-15.0	41.17	16.73	40.51	17.15	39.85	17.57	39.51	17.78	39.18	17.99	38.17	17.80
	-11.8	-13.0	41.54	16.85	40.86	17.25	40.18	17.65	39.84	17.87	39.50	18.06	38.17	17.30
	-9.8	-11.0	41.88	16.95	41.19	17.33	40.49	17.72	40.15	17.94	39.50	17.61	38.17	16.67
	-9.5	-10.0	42.04	16.90	41.34	17.29	40.64	17.68	40.15	17.48	39.50	17.05	38.17	16.06
	-8.5	-9.1	42.18	16.96	41.48	17.35	40.77	17.71	40.15	17.13	39.50	16.61	38.17	15.58
	-7.0	-7.6	42.41	17.03	41.70	17.38	40.77	17.27	40.15	16.63	39.50	16.11	38.17	15.01
	-5.0	-5.6	41.94	16.77	41.22	17.14	40.05	16.45	39.44	15.84	38.82	15.27	37.52	14.16
	-3.0	-3.7	43.43	17.09	42.45	16.92	41.22	16.19	40.58	15.54	39.93	14.94	38.57	13.70
	0.0	-0.7	46.95	17.54	45.63	17.01	44.26	15.76	43.55	15.12	42.83	14.47	41.31	13.25
	3.0	2.2	52.32	18.55	50.78	17.21	49.17	15.79	48.33	15.11	47.47	14.40	45.66	13.43
	5.0	4.1	56.68	18.87	54.94	17.43	53.11	15.96	52.16	15.20	50.46	14.47	48.73	13.55
	7.0	6.0	64.43	20.10	61.74	18.27	60.00	16.75	57.51	15.80	55.00	14.81	50.00	13.01
	9.0	7.9	65.17	18.97	63.16	17.43	60.01	15.80	57.51	14.81	55.00	13.80	50.00	11.77
	11.0	9.8	66.91	18.19	65.00	16.67	60.01	14.81	57.51	13.93	55.00	13.01	50.00	11.03
	13.0	11.8	68.39	17.23	65.00	15.62	60.01	13.87	57.51	12.94	55.00	12.06	50.00	10.35
15.0	13.7	70.00	16.40	65.00	14.71	60.01	12.90	57.51	11.97	55.00	11.09	50.00	9.85	
18.0	16.6	70.00	14.28	65.00	12.83	60.01	11.36	57.51	10.72	55.00	10.22	50.00	9.08	
21.0	19.5	70.00	13.14	65.00	11.57	60.01	10.29	57.51	9.82	55.00	9.35	50.00	8.38	
24.0	22.4	70.00	11.93	65.00	10.35	60.01	9.37	57.51	8.92	55.00	8.48	50.00	7.66	
27.0	25.3	70.00	10.66	65.00	9.36	60.01	8.46	57.51	8.05	55.00	7.61	50.00	6.64	
30.0	28.1	70.00	9.52	65.00	8.47	60.01	7.64	57.51	7.26	55.00	6.82	50.00	5.75	

**Abbreviations:**

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

**Notes:**

Shaded cells indicate rating condition.

Table continued on next page ...

Table2-8.22:24HP heating capacity(continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
70%	-30.0	-30.5	33.60	13.80	33.54	14.45	33.06	15.05	32.73	15.11	31.57	14.32	30.64	13.77
	-25.0	-25.4	35.12	14.66	34.59	15.11	34.06	15.61	33.76	15.76	33.23	15.54	32.05	14.90
	-19.8	-20.0	36.09	15.31	35.52	15.73	34.95	16.13	34.66	16.36	34.38	16.57	33.40	16.05
	-18.8	-19.0	36.25	15.39	35.68	15.79	35.10	16.22	34.81	16.44	34.52	16.64	33.40	15.76
	-16.7	-17.0	36.57	15.59	35.97	15.95	35.38	16.37	35.09	16.59	34.57	16.29	33.40	15.32
	-13.7	-15.0	36.86	15.85	36.26	16.23	35.65	16.63	35.13	16.33	34.57	16.03	33.40	14.96
	-11.8	-13.0	37.14	15.95	36.53	16.31	35.67	16.19	35.13	15.90	34.57	15.54	33.40	14.43
	-9.8	-11.0	37.40	16.04	36.73	16.27	35.67	15.78	35.13	15.38	34.57	14.86	33.40	13.75
	-9.5	-10.0	37.53	16.00	36.73	15.86	35.67	15.26	35.13	14.85	34.57	14.32	33.40	13.19
	-8.5	-9.1	37.64	16.07	36.73	15.55	35.67	14.84	35.13	14.41	34.57	13.85	33.40	12.67
	-7.0	-7.6	37.76	15.94	36.73	15.13	35.67	14.37	35.13	13.91	34.57	13.32	33.40	12.16
	-5.0	-5.6	37.08	15.22	36.08	14.39	35.04	13.58	34.51	13.12	33.96	12.54	32.83	11.48
	-3.0	-3.7	38.18	15.01	37.14	14.13	36.07	13.18	35.51	12.66	34.94	12.15	33.75	11.16
	0.0	-0.7	41.08	14.77	39.93	13.76	38.73	12.72	38.11	12.24	37.47	11.88	36.14	11.11
	3.0	2.2	45.79	14.89	44.43	13.79	43.02	12.84	42.29	12.45	41.54	12.08	39.96	11.31
	5.0	4.1	49.60	15.04	48.07	13.88	46.47	13.05	45.63	12.70	44.15	12.03	42.64	11.25
	7.0	6.0	56.38	15.93	54.02	14.73	52.50	13.87	50.30	13.11	48.13	12.19	43.76	10.52
	9.0	7.9	57.03	15.08	55.26	14.15	52.50	12.74	50.30	11.87	48.13	11.13	43.76	9.90
	11.0	9.8	58.54	14.58	56.88	13.64	52.50	11.83	50.30	11.09	48.13	10.46	43.76	9.37
	13.0	11.8	59.84	13.95	56.88	12.67	52.50	10.99	50.30	10.43	48.13	9.89	43.76	8.83
	15.0	13.7	61.26	13.31	56.88	11.70	52.50	10.43	50.30	9.86	48.13	9.35	43.76	8.36
18.0	16.6	61.26	11.64	56.88	10.53	52.50	9.65	50.30	9.12	48.13	8.60	43.76	7.66	
21.0	19.5	61.26	10.47	56.88	9.62	52.50	8.80	50.30	8.36	48.13	7.85	43.76	6.98	
24.0	22.4	61.26	9.49	56.88	8.73	52.50	7.99	50.30	7.65	48.13	7.13	43.76	6.26	
27.0	25.3	61.26	8.60	56.88	7.88	52.50	7.03	50.30	6.62	48.13	6.24	43.76	5.49	
30.0	28.1	61.26	7.80	56.88	7.10	52.50	6.19	50.30	5.73	48.13	5.45	43.76	4.82	
60%	-30.0	-30.5	30.27	13.19	29.83	13.68	28.71	12.93	28.28	12.84	27.81	12.73	26.57	12.35
	-25.0	-25.4	31.07	13.81	30.58	14.26	29.72	13.85	29.26	13.62	28.79	13.37	27.81	12.84
	-19.8	-20.0	31.76	14.40	31.25	14.81	30.58	14.75	30.11	14.37	29.63	13.97	28.63	13.12
	-18.8	-19.0	31.88	14.49	31.37	14.89	30.58	14.51	30.11	14.09	29.63	13.70	28.63	12.85
	-16.7	-17.0	32.11	14.67	31.49	14.74	30.58	14.18	30.11	13.75	29.63	13.29	28.63	12.39
	-13.7	-15.0	32.33	14.93	31.49	14.49	30.58	13.90	30.11	13.44	29.63	12.95	28.63	11.99
	-11.8	-13.0	32.36	14.58	31.49	14.10	30.58	13.35	30.11	12.94	29.63	12.47	28.63	11.49
	-9.8	-11.0	32.36	14.20	31.49	13.58	30.58	12.74	30.11	12.32	29.63	11.87	28.63	11.04
	-9.5	-10.0	32.36	13.74	31.49	13.13	30.58	12.19	30.11	11.82	29.63	11.34	28.63	10.63
	-8.5	-9.1	32.36	13.36	31.49	12.69	30.58	11.75	30.11	11.35	29.63	10.96	28.63	10.41
	-7.0	-7.6	32.36	12.94	31.49	12.24	30.58	11.25	30.11	10.91	29.63	10.60	28.63	10.06
	-5.0	-5.6	31.78	12.26	30.92	11.54	30.04	10.59	29.58	10.30	29.11	10.00	28.14	9.47
	-3.0	-3.7	32.73	11.92	31.84	11.12	30.91	10.31	30.44	10.02	29.95	9.69	28.93	9.20
	0.0	-0.7	34.72	11.94	33.71	11.25	32.67	10.69	32.12	10.34	31.57	9.97	30.40	9.38
	3.0	2.2	38.61	12.06	37.42	11.45	36.19	10.85	35.54	10.53	34.88	10.15	33.07	9.47
	5.0	4.1	41.73	12.31	40.40	11.64	38.53	10.79	37.69	10.37	37.31	10.16	36.55	9.91
	7.0	6.0	46.80	13.00	45.90	12.37	44.19	11.11	42.32	10.61	40.47	10.13	39.44	9.83
	9.0	7.9	48.30	12.34	47.37	11.49	44.19	10.49	42.32	10.02	40.47	9.51	39.44	9.19
	11.0	9.8	49.80	11.84	47.37	10.76	44.19	9.93	45.51	10.17	40.47	9.01	39.44	8.69
	13.0	11.8	51.29	11.23	47.37	10.13	47.54	10.12	45.51	9.58	40.47	8.48	39.44	8.18
	15.0	13.7	51.29	10.57	47.37	9.65	47.54	9.48	45.51	9.02	40.47	8.00	39.44	7.73
18.0	16.6	51.29	9.78	47.37	8.83	47.54	8.72	45.51	8.29	40.47	7.34	39.44	7.09	
21.0	19.5	51.29	8.92	47.37	8.10	47.54	7.96	45.51	7.60	40.47	6.64	39.44	6.40	
24.0	22.4	55.66	8.78	47.37	7.38	47.54	7.25	45.51	6.80	40.47	5.97	39.44	5.70	
27.0	25.3	55.66	7.71	47.37	6.39	47.54	6.28	45.51	5.95	40.47	5.25	39.44	5.03	
30.0	28.1	55.66	6.78	47.37	5.53	47.54	5.43	45.51	5.21	40.47	4.62	39.44	4.45	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

Table 2-8.22: 24HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
50%	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
	-30.0	-30.5	25.54	12.44	24.84	12.22	24.12	11.97	23.74	11.84	23.35	11.64	22.56	11.24
	-25.0	-25.4	26.12	12.87	25.39	12.46	24.65	12.02	24.25	11.79	23.85	11.51	23.03	11.01
	-19.8	-20.0	26.64	13.29	25.89	12.68	25.12	12.04	24.72	11.70	24.31	11.36	23.46	10.76
	-18.8	-19.0	26.64	13.06	25.89	12.44	25.12	11.80	24.72	11.46	24.31	11.11	23.46	10.61
	-16.7	-17.0	26.64	12.76	25.89	12.13	25.12	11.43	24.72	11.01	24.31	10.68	23.46	10.26
	-13.7	-15.0	26.64	12.52	25.89	11.83	25.12	11.07	24.72	10.65	24.31	10.37	23.46	9.95
	-11.8	-13.0	26.64	12.04	25.89	11.38	25.12	10.58	24.72	10.26	24.31	9.97	23.46	9.56
	-9.8	-11.0	26.64	11.46	25.89	10.78	25.12	10.19	24.72	9.86	24.31	9.56	23.46	9.13
	-9.5	-10.0	26.64	10.99	25.89	10.28	25.12	9.79	24.72	9.54	24.31	9.31	23.46	8.87
	-8.5	-9.1	26.64	10.57	25.89	9.94	25.12	9.55	24.72	9.34	24.31	9.13	23.46	8.70
	-7.0	-7.6	26.64	10.11	25.89	9.63	25.12	9.24	24.72	9.03	24.31	8.83	23.46	8.43
	-5.0	-5.6	26.16	9.54	25.44	9.05	24.69	8.66	24.30	8.46	23.90	8.29	23.07	8.00
	-3.0	-3.7	26.93	9.29	26.17	8.80	25.39	8.42	24.98	8.22	24.57	8.09	23.70	7.85
	0.0	-0.7	28.93	9.31	28.09	8.78	27.22	8.33	26.77	8.19	26.30	8.05	25.33	7.79
	3.0	2.2	32.17	9.50	31.19	8.99	30.16	8.58	29.62	8.40	29.07	8.24	27.56	7.86
	5.0	4.1	34.78	9.59	33.66	9.08	32.11	8.60	31.64	8.52	31.09	8.39	28.76	7.58
	7.0	6.0	39.00	9.66	37.37	9.24	34.51	8.52	33.06	8.14	31.63	7.79	28.76	7.11
	9.0	7.9	40.25	9.41	37.37	8.67	34.51	7.94	33.06	7.61	31.63	7.25	28.76	6.56
	11.0	9.8	40.26	8.88	37.37	8.20	34.51	7.53	33.06	7.18	31.63	6.85	28.76	6.23
	13.0	11.8	40.26	8.36	37.37	7.74	34.51	7.08	33.06	6.76	31.63	6.47	28.76	5.86
15.0	13.7	40.26	7.93	37.37	7.28	34.51	6.69	33.06	6.40	31.63	6.14	28.76	5.58	
18.0	16.6	40.26	7.22	37.37	6.66	34.51	6.10	33.06	5.82	31.63	5.56	28.76	5.07	
21.0	19.5	40.26	6.58	37.37	6.02	34.51	5.50	33.06	5.25	31.63	5.00	28.76	4.54	
24.0	22.4	40.26	5.93	37.37	5.38	34.51	4.91	33.06	4.67	31.63	4.42	28.76	4.00	
27.0	25.3	40.26	5.17	37.37	4.74	34.51	4.31	33.06	4.08	31.63	3.88	28.76	3.51	
30.0	28.1	40.26	4.52	37.37	4.17	34.51	3.79	33.06	3.56	31.63	3.40	28.76	3.08	

Abbreviations:  
 CR: Combination ratio  
 TC: Total capacity (kW)  
 PI: Power input (compressor + outdoor fan motor) (kW)  
 Notes:  
 Shaded cells indicate rating condition.



Table 2-8.23: 26HP heating capacity

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
130%	-30.0	-30.5	57.41	20.96	56.30	21.60	55.20	22.18	54.65	22.60	54.10	22.88	52.99	23.47
	-25.0	-25.4	57.41	21.13	56.30	21.69	55.20	22.23	54.65	22.54	54.10	22.79	52.99	23.31
	-19.8	-20.0	57.41	21.31	56.30	21.78	55.20	22.28	54.65	22.48	54.10	22.70	52.99	23.16
	-18.8	-19.0	57.41	21.29	56.30	21.76	55.20	22.19	54.65	22.43	54.10	22.65	52.99	23.07
	-16.7	-17.0	57.41	21.22	56.30	21.66	55.20	22.10	54.65	22.33	54.10	22.52	52.99	22.95
	-13.7	-15.0	57.41	21.27	56.30	21.70	55.20	22.11	54.65	22.32	54.53	22.71	53.54	23.18
	-11.8	-13.0	57.85	21.25	56.86	21.72	55.87	22.19	55.37	22.42	54.87	22.65	54.76	23.47
	-9.8	-11.0	58.22	21.20	58.13	21.99	57.22	22.51	56.77	22.76	56.31	23.01	55.39	23.50
	-9.5	-10.0	59.40	21.44	58.48	21.93	57.55	22.42	57.09	22.66	56.62	22.89	55.69	23.40
	-8.5	-9.1	59.70	21.48	58.77	21.97	57.83	22.45	57.37	22.67	56.90	22.94	55.95	23.41
	-7.0	-7.6	60.20	21.49	59.25	21.97	58.30	22.43	57.82	22.68	57.34	22.92	56.38	23.40
	-5.0	-5.6	59.83	21.15	58.87	21.59	57.90	22.06	57.42	22.29	56.93	22.53	55.96	22.98
	-3.0	-3.7	62.02	21.41	61.02	21.88	60.02	22.32	59.51	22.57	59.01	22.79	57.99	23.25
	0.0	-0.7	67.28	22.38	66.20	22.87	65.11	23.34	64.56	23.60	64.01	23.82	62.91	24.32
	3.0	2.2	75.43	24.21	74.24	24.76	73.03	25.30	72.43	25.56	71.82	25.83	70.60	26.35
	5.0	4.1	80.96	25.43	80.77	26.33	79.48	26.93	78.83	27.21	78.19	27.49	76.88	28.07
	7.0	6.0	94.42	29.02	92.61	29.57	90.79	30.11	89.88	30.38	88.98	30.63	87.16	30.91
	9.0	7.9	97.44	29.32	95.57	29.90	93.70	30.43	92.76	30.71	91.82	30.99	87.16	29.21
	11.0	9.8	100.47	29.63	98.53	30.20	96.60	30.75	95.64	31.02	94.67	31.29	87.16	27.62
	13.0	11.8	103.49	29.87	101.50	30.45	99.51	31.03	98.51	31.31	94.67	29.88	88.35	26.36
15.0	13.7	106.51	30.14	104.46	30.73	102.41	31.35	101.39	31.08	94.67	28.22	88.35	24.81	
18.0	16.6	111.04	30.56	108.91	31.20	105.99	30.62	101.39	28.43	94.67	25.79	88.35	22.65	
21.0	19.5	115.57	30.94	113.35	31.60	105.99	28.00	101.56	26.04	94.67	23.55	88.35	20.67	
24.0	22.4	120.11	31.39	114.76	29.32	105.99	25.55	101.56	23.72	94.67	21.36	88.35	18.90	
27.0	25.3	124.64	30.79	114.76	26.78	105.99	23.23	101.56	21.48	94.67	19.49	88.35	17.17	
30.0	28.1	126.51	29.54	114.76	24.46	105.99	21.12	101.56	19.46	97.25	18.27	88.35	15.59	
120%	-30.0	-30.5	54.88	20.54	53.83	21.18	52.77	21.81	52.25	22.13	51.72	22.43	50.66	23.01
	-25.0	-25.4	54.88	20.70	53.83	21.24	52.77	21.79	52.25	22.06	51.72	22.32	50.66	22.84
	-19.8	-20.0	54.88	20.87	53.83	21.30	52.77	21.78	52.25	21.98	51.72	22.22	50.66	22.67
	-18.8	-19.0	54.88	20.85	53.83	21.32	52.77	21.73	52.25	21.97	51.72	22.17	50.66	22.60
	-16.7	-17.0	54.88	20.81	53.83	21.22	52.77	21.64	52.25	21.85	51.72	22.06	51.13	22.67
	-13.7	-15.0	54.88	20.84	54.29	21.42	53.34	21.87	52.87	22.11	52.40	22.34	52.24	23.16
	-11.8	-13.0	55.59	20.91	55.45	21.69	54.59	22.19	54.15	22.44	53.72	22.68	52.85	23.19
	-9.8	-11.0	56.99	21.28	56.11	21.79	55.22	22.26	54.77	22.51	54.33	22.74	53.43	23.22
	-9.5	-10.0	57.32	21.22	56.42	21.68	55.52	22.16	55.07	22.41	54.62	22.64	53.71	23.10
	-8.5	-9.1	57.61	21.26	56.70	21.70	55.79	22.19	55.33	22.43	54.87	22.66	53.96	23.13
	-7.0	-7.6	58.07	21.26	57.14	21.72	56.22	22.20	55.75	22.42	55.28	22.65	54.35	23.13
	-5.0	-5.6	57.68	20.92	56.74	21.35	55.80	21.80	55.33	22.02	54.86	22.25	53.91	22.72
	-3.0	-3.7	59.78	21.19	58.81	21.63	57.83	22.09	57.34	22.31	56.85	22.53	55.87	23.00
	0.0	-0.7	64.87	22.19	63.81	22.66	62.75	23.15	62.22	23.36	61.69	23.61	60.62	24.06
	3.0	2.2	72.76	24.08	71.60	24.60	70.43	25.11	69.84	25.37	69.26	25.63	67.95	25.92
	5.0	4.1	79.18	25.65	77.94	26.22	76.68	26.78	76.05	27.05	75.42	27.35	73.34	26.50
	7.0	6.0	90.27	28.68	88.53	29.19	86.80	29.71	85.93	29.98	85.06	30.22	81.72	27.91
	9.0	7.9	93.16	28.98	91.37	29.53	89.58	30.06	88.68	30.34	87.78	29.80	81.72	26.39
	11.0	9.8	96.05	29.31	94.20	29.87	92.35	30.41	91.43	30.09	87.78	28.18	81.72	24.89
	13.0	11.8	98.94	29.61	97.03	30.17	95.13	30.25	91.43	28.35	87.78	26.53	81.72	23.36
15.0	13.7	101.82	29.89	99.87	30.50	97.91	29.41	91.43	26.75	87.78	25.01	81.72	21.97	
18.0	16.6	106.16	30.37	104.12	30.12	97.91	26.92	93.76	25.06	87.78	22.81	81.72	20.14	
21.0	19.5	110.49	30.80	104.12	27.56	97.91	24.52	93.76	22.84	87.78	20.74	81.72	18.43	
24.0	22.4	114.16	29.10	104.12	25.13	97.91	22.28	93.76	20.78	87.78	18.99	81.72	16.76	
27.0	25.3	114.16	26.57	105.95	23.25	97.91	20.29	93.76	18.94	87.78	17.27	81.72	15.15	
30.0	28.1	114.16	24.25	105.95	21.15	97.93	18.49	93.76	17.26	89.82	16.07	81.72	13.70	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

# MDV8 ECO VRF 50Hz



Table 2-8.23: 26HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
110%	-30.0	-30.5	51.84	19.95	50.85	20.58	49.85	21.17	49.35	21.45	48.85	21.75	47.86	22.29
	-25.0	-25.4	51.84	20.09	50.85	20.61	49.85	21.13	49.35	21.38	48.85	21.64	47.86	22.13
	-19.8	-20.0	51.84	20.23	50.85	20.65	49.85	21.10	49.35	21.30	48.85	21.53	47.86	21.97
	-18.8	-19.0	51.84	20.22	50.85	20.64	49.85	21.06	49.35	21.27	48.85	21.48	48.32	22.12
	-16.7	-17.0	51.84	20.17	51.29	20.75	50.40	21.21	49.96	21.45	49.52	21.66	49.39	22.47
	-13.7	-15.0	52.53	20.47	52.41	21.22	51.60	21.74	51.20	21.98	50.79	22.23	49.98	22.74
	-11.8	-13.0	53.88	20.85	53.05	21.30	52.21	21.79	51.79	22.04	51.38	22.29	50.54	22.77
	-9.8	-11.0	54.50	20.93	53.64	21.39	52.78	21.86	52.35	22.07	51.92	22.32	51.06	22.81
	-9.5	-10.0	54.79	20.85	53.92	21.30	53.05	21.76	52.62	22.00	52.18	22.22	51.30	22.69
	-8.5	-9.1	55.05	20.87	54.17	21.32	53.29	21.78	52.85	22.01	52.41	22.24	51.53	22.70
	-7.0	-7.6	55.47	20.89	54.57	21.34	53.68	21.78	53.23	22.00	52.78	22.23	51.88	22.70
	-5.0	-5.6	55.05	20.56	54.14	20.98	53.24	21.41	52.79	21.63	52.33	21.84	51.42	22.28
	-3.0	-3.7	57.05	20.83	56.12	21.28	55.18	21.69	54.70	21.91	54.23	22.12	53.28	22.57
	0.0	-0.7	61.89	21.87	60.88	22.32	59.86	22.78	59.36	23.01	58.84	23.23	57.50	23.01
	3.0	2.2	69.49	23.79	68.37	24.30	67.23	24.82	66.67	25.06	66.10	25.30	63.76	23.48
	5.0	4.1	75.68	25.41	74.48	25.97	73.26	26.50	72.65	26.78	71.49	26.03	68.76	23.91
	7.0	6.0	85.27	28.09	84.38	28.84	82.89	29.41	81.83	28.80	80.35	27.69	74.75	24.54
	9.0	7.9	88.66	28.67	87.13	29.22	85.33	29.05	83.77	27.91	80.35	26.16	74.75	23.16
	11.0	9.8	91.47	29.03	89.88	29.62	87.24	28.10	85.97	27.06	80.35	24.69	74.75	21.77
	13.0	11.8	94.30	29.37	92.43	29.32	87.24	26.42	85.97	25.45	80.35	23.14	74.75	20.56
15.0	13.7	97.11	29.74	94.33	28.26	87.24	24.94	85.97	23.93	80.35	21.77	74.75	19.44	
18.0	16.6	100.28	28.82	97.16	26.65	87.24	22.70	85.97	21.78	80.35	19.94	74.75	17.78	
21.0	19.5	104.37	27.42	97.16	24.27	87.24	20.68	85.97	19.93	80.35	18.24	74.75	16.23	
24.0	22.4	104.61	25.04	97.16	22.04	87.24	18.89	85.97	18.22	80.35	16.61	74.75	14.66	
27.0	25.3	104.61	22.72	97.16	20.05	87.24	17.19	85.97	16.52	80.35	15.00	74.75	15.41	
30.0	28.1	104.61	20.62	97.16	18.23	89.84	16.11	85.97	14.97	82.30	13.88	74.75	16.19	
100%	-30.0	-30.5	51.53	20.42	50.54	21.05	49.55	21.65	49.06	21.96	48.56	22.23	47.57	22.82
	-25.0	-25.4	51.53	20.56	50.54	21.09	49.55	21.61	49.06	21.87	48.56	22.12	47.57	22.64
	-19.8	-20.0	51.53	20.70	50.54	21.12	49.55	21.57	49.06	21.79	48.56	22.01	47.57	22.45
	-18.8	-19.0	51.53	20.69	50.54	21.09	49.55	21.54	49.06	21.75	48.56	21.97	48.03	22.62
	-16.7	-17.0	51.53	20.62	50.98	21.23	50.10	21.68	49.66	21.91	49.22	22.16	49.11	22.99
	-13.7	-15.0	52.21	20.96	52.09	21.73	51.29	22.24	50.89	22.49	50.49	22.73	49.69	23.27
	-11.8	-13.0	53.55	21.35	52.72	21.83	51.90	22.33	51.48	22.56	51.07	22.80	50.24	23.33
	-9.8	-11.0	54.17	21.43	53.32	21.91	52.47	22.40	52.04	22.65	51.61	22.87	50.76	23.35
	-9.5	-10.0	54.46	21.36	53.60	21.82	52.74	22.29	52.31	22.54	51.87	22.79	51.01	23.26
	-8.5	-9.1	54.72	21.41	53.85	21.86	52.98	22.32	52.54	22.57	52.10	22.80	51.23	23.30
	-7.0	-7.6	55.13	21.45	54.25	21.90	53.36	22.35	52.91	22.59	52.47	22.84	51.58	23.29
	-5.0	-5.6	54.70	21.11	53.81	21.55	52.91	22.01	52.46	22.22	52.01	22.46	50.96	22.57
	-3.0	-3.7	56.68	21.45	55.75	21.89	54.82	22.34	54.35	22.57	53.88	22.80	52.39	22.01
	0.0	-0.7	61.49	22.56	60.48	23.03	59.47	23.49	58.97	23.73	58.18	23.35	56.11	21.64
	3.0	2.2	69.02	24.61	67.91	25.11	66.79	25.61	65.65	24.70	64.48	23.81	62.02	21.94
	5.0	4.1	75.17	26.30	73.97	26.85	72.13	26.19	70.83	25.24	68.53	23.90	66.19	22.10
	7.0	6.0	84.76	29.12	83.83	29.87	81.50	28.01	78.32	26.39	74.76	24.60	66.19	20.80
	9.0	7.9	87.47	29.54	85.79	29.01	81.50	26.45	78.32	24.88	74.76	23.23	66.19	19.75
	11.0	9.8	90.86	30.17	85.79	27.40	81.50	24.94	78.32	23.45	74.76	21.86	66.19	18.70
	13.0	11.8	92.90	29.13	85.79	25.78	81.50	23.44	78.32	22.01	74.76	20.61	66.19	17.65
15.0	13.7	92.90	27.48	85.79	24.30	81.50	22.04	78.32	20.77	74.76	19.49	66.19	16.67	
18.0	16.6	92.90	25.10	88.36	22.83	81.55	20.18	78.32	19.03	74.76	17.85	69.26	16.49	
21.0	19.5	92.90	22.87	88.36	20.80	81.55	18.47	78.32	17.39	74.76	16.24	69.26	14.36	
24.0	22.4	92.90	20.73	88.36	18.98	81.55	16.78	78.32	15.75	74.76	14.72	69.26	15.06	
27.0	25.3	92.90	18.95	88.36	17.22	81.55	15.14	78.32	14.19	74.76	15.42	69.26	13.76	
30.0	28.1	95.22	17.75	88.36	15.63	81.55	13.66	78.32	12.78	74.76	16.15	69.26	12.56	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

Table 2-8.23: 26HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
90%	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
	-30.0	-30.5	46.38	19.02	45.49	19.56	44.60	20.11	44.15	20.37	43.70	20.68	42.81	21.15
	-25.0	-25.4	46.38	19.13	45.49	19.61	44.60	20.08	44.15	20.31	43.70	20.57	42.81	21.02
	-19.8	-20.0	46.85	19.44	46.06	19.90	45.26	20.36	45.58	20.91	45.23	21.18	44.54	21.74
	-18.8	-19.0	47.01	19.49	46.92	20.27	46.21	20.76	45.86	21.02	45.50	21.25	44.80	21.80
	-16.7	-17.0	48.23	19.95	47.50	20.44	46.77	20.94	46.40	21.19	46.03	21.40	45.30	21.94
	-13.7	-15.0	48.80	20.25	48.05	20.71	47.29	21.20	46.91	21.44	46.53	21.68	45.77	22.18
	-11.8	-13.0	49.34	20.36	48.56	20.81	47.79	21.27	47.39	21.51	47.00	21.73	46.22	22.21
	-9.8	-11.0	49.84	20.45	49.04	20.89	48.24	21.33	47.84	21.57	47.44	21.79	46.64	22.26
	-9.5	-10.0	50.07	20.39	49.26	20.82	48.45	21.26	48.05	21.49	47.64	21.70	46.66	21.78
	-8.5	-9.1	50.27	20.42	49.46	20.86	48.64	21.30	48.23	21.51	47.82	21.74	46.66	21.43
	-7.0	-7.6	50.60	20.47	49.77	20.90	48.94	21.35	48.53	21.55	48.11	21.77	46.66	20.81
	-5.0	-5.6	50.13	20.17	49.29	20.58	48.46	20.99	48.04	21.21	47.45	20.98	45.86	19.62
	-3.0	-3.7	51.93	20.50	51.07	20.92	50.20	21.34	49.61	21.16	48.81	20.48	47.15	19.11
	0.0	-0.7	56.37	21.61	55.43	22.06	54.10	21.57	53.25	20.88	52.36	20.16	50.49	18.72
	3.0	2.2	63.37	23.66	62.08	23.55	60.11	22.05	59.07	21.27	58.03	20.49	55.83	18.98
	5.0	4.1	69.12	25.37	67.16	24.13	64.91	22.48	63.76	21.66	61.68	20.54	59.57	19.22
	7.0	6.0	78.77	27.70	75.47	25.64	73.35	24.00	70.37	22.54	68.56	21.54	59.57	18.21
	9.0	7.9	79.67	26.49	77.21	24.76	73.35	22.58	70.37	21.23	68.56	20.42	59.57	17.24
	11.0	9.8	81.80	25.71	79.61	24.07	73.35	21.27	70.37	20.12	68.56	19.34	59.57	16.31
	13.0	11.8	83.61	24.68	79.61	22.56	73.35	20.08	70.37	18.98	68.56	18.24	59.57	15.37
15.0	13.7	83.61	23.26	79.61	21.22	73.35	18.98	70.37	17.95	68.56	17.21	59.57	14.45	
18.0	16.6	83.61	21.16	79.61	19.49	73.42	17.42	70.37	16.38	68.56	16.31	59.57	14.95	
21.0	19.5	83.61	19.32	79.61	17.80	73.42	15.84	70.37	14.86	68.56	14.19	59.57	13.68	
24.0	22.4	83.61	17.64	79.61	16.16	73.42	14.28	70.37	15.50	68.56	14.88	59.57	12.49	
27.0	25.3	85.66	16.37	79.61	14.54	73.42	15.00	70.37	14.17	68.56	13.57	59.57	11.36	
30.0	28.1	85.66	14.83	79.61	13.08	73.42	15.77	70.37	12.95	68.56	12.37	61.26	10.63	
80%	-30.0	-30.5	41.23	17.55	40.43	18.07	39.64	18.52	39.25	18.79	38.85	19.04	38.06	19.32
	-25.0	-25.4	41.23	17.66	40.84	18.28	40.15	18.76	39.80	19.01	40.07	19.57	39.34	19.96
	-19.8	-20.0	43.29	18.66	42.64	19.13	41.98	19.61	41.65	19.85	41.33	20.11	40.67	20.61
	-18.8	-19.0	43.54	18.77	42.87	19.22	42.21	19.69	41.87	19.95	41.54	20.18	40.88	20.66
	-16.7	-17.0	44.02	18.95	43.33	19.40	42.65	19.85	42.30	20.08	41.96	20.30	41.27	20.79
	-13.7	-15.0	44.46	19.23	43.75	19.66	43.05	20.11	42.69	20.34	42.34	20.57	41.47	20.67
	-11.8	-13.0	44.87	19.34	44.15	19.76	43.42	20.19	43.06	20.41	42.70	20.63	41.47	19.95
	-9.8	-11.0	45.26	19.41	44.52	19.84	43.78	20.25	43.41	20.48	42.93	20.43	41.48	19.23
	-9.5	-10.0	45.44	19.36	44.70	19.78	43.95	20.18	43.58	20.39	42.92	19.95	41.48	18.76
	-8.5	-9.1	45.60	19.42	44.85	19.82	44.10	20.23	43.63	20.20	42.92	19.60	41.48	18.42
	-7.0	-7.6	45.86	19.47	45.10	19.86	44.30	20.17	43.62	19.60	42.92	19.03	41.47	17.85
	-5.0	-5.6	45.37	19.17	44.61	19.55	43.52	19.05	42.86	18.49	42.18	17.94	40.77	16.79
	-3.0	-3.7	47.00	19.51	46.13	19.71	44.79	18.60	44.10	18.02	43.40	17.47	41.92	16.31
	0.0	-0.7	51.01	20.59	49.58	19.46	48.09	18.31	47.32	17.71	46.54	17.14	44.89	16.08
	3.0	2.2	56.86	21.15	55.17	19.89	53.43	18.62	52.52	17.98	51.59	17.45	49.63	16.42
	5.0	4.1	61.59	21.65	59.69	20.31	57.72	18.96	56.69	18.38	54.83	17.58	52.95	16.62
	7.0	6.0	70.01	23.26	67.09	21.52	65.20	20.28	63.72	19.61	59.83	18.18	54.40	16.16
	9.0	7.9	70.82	22.19	68.63	20.72	65.20	19.23	63.72	18.58	59.83	17.22	54.40	15.25
	11.0	9.8	72.71	21.43	68.63	19.60	65.20	18.21	63.72	17.60	59.83	16.29	54.40	14.40
	13.0	11.8	74.32	20.55	68.63	18.50	65.20	17.15	63.72	16.52	59.83	15.30	54.40	15.00
	15.0	13.7	74.32	19.44	70.71	18.02	65.20	16.17	63.72	15.57	59.83	14.41	54.40	14.26
18.0	16.6	76.11	18.25	70.71	16.49	66.48	15.61	63.72	14.72	59.83	14.93	54.40	13.17	
21.0	19.5	76.11	16.61	70.71	14.95	66.48	15.59	63.72	14.72	59.83	13.63	54.40	12.03	
24.0	22.4	76.11	15.01	70.71	13.44	66.48	14.23	63.72	13.44	59.83	12.44	54.40	10.98	
27.0	25.3	76.11	13.46	70.71	14.19	66.48	12.98	63.72	12.25	59.83	11.32	54.40	9.75	
30.0	28.1	76.11	12.07	70.71	14.98	66.48	11.84	63.72	11.16	59.83	10.30	54.40	8.66	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

# MDV8 ECO VRF 50Hz



Table 2-8.23: 26HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
70%	-30.0	-30.5	36.07	16.06	35.75	16.64	35.15	17.14	35.38	17.65	34.43	17.41	33.30	16.75
	-25.0	-25.4	37.86	16.99	37.31	17.47	36.75	17.98	36.48	18.24	36.09	18.34	34.78	17.69
	-19.8	-20.0	38.96	17.63	38.36	18.06	37.75	18.53	37.45	18.77	37.15	18.98	36.13	18.59
	-18.8	-19.0	39.15	17.73	38.54	18.15	37.92	18.60	37.62	18.82	37.31	19.05	36.30	18.65
	-16.7	-17.0	39.51	17.92	38.88	18.32	38.25	18.75	37.93	18.97	37.56	19.06	36.29	18.05
	-13.7	-15.0	39.84	18.18	39.20	18.58	38.55	19.00	38.17	19.08	37.56	18.58	36.29	17.57
	-11.8	-13.0	40.16	18.28	39.50	18.67	38.76	18.86	38.17	18.41	37.56	17.92	36.30	16.91
	-9.8	-11.0	40.46	18.36	39.79	18.76	38.76	18.21	38.17	17.73	37.56	17.24	36.29	16.23
	-9.5	-10.0	40.60	18.32	39.92	18.70	38.77	17.76	38.17	17.30	37.56	16.80	36.30	15.81
	-8.5	-9.1	40.72	18.38	39.92	18.39	38.77	17.48	38.17	17.00	37.56	16.50	36.29	15.48
	-7.0	-7.6	40.92	18.41	39.92	17.88	38.77	16.94	38.17	16.46	37.57	15.98	36.29	15.06
	-5.0	-5.6	40.29	17.71	39.21	16.84	38.08	15.94	37.50	15.46	36.91	15.00	35.67	14.23
	-3.0	-3.7	41.49	17.31	40.36	16.42	39.19	15.51	38.59	15.04	37.97	14.63	36.68	13.90
	0.0	-0.7	44.64	17.09	43.39	16.15	42.09	15.22	41.41	14.85	40.72	14.48	39.28	13.71
	3.0	2.2	49.75	17.45	48.28	16.43	46.74	15.61	45.96	15.23	45.13	14.81	43.43	13.99
	5.0	4.1	53.89	17.82	52.24	16.86	50.51	16.02	49.59	15.57	47.98	14.91	46.33	14.10
	7.0	6.0	61.27	19.12	58.70	17.95	57.05	17.12	54.73	16.24	52.34	15.41	47.61	15.04
	9.0	7.9	61.96	18.31	60.05	17.39	57.14	16.24	54.73	15.35	52.34	14.42	47.61	14.03
	11.0	9.8	63.63	17.81	61.90	16.97	57.14	15.31	54.73	14.49	52.34	15.15	47.61	13.24
	13.0	11.8	65.03	17.13	61.90	15.95	57.14	14.37	54.73	15.15	52.34	14.24	47.61	12.42
15.0	13.7	65.03	16.14	61.90	15.03	57.14	15.32	54.73	14.37	52.34	13.42	47.61	11.67	
18.0	16.6	66.65	15.10	61.90	15.54	57.14	14.03	54.73	13.25	52.34	12.38	47.61	10.80	
21.0	19.5	66.65	13.62	61.90	14.20	57.14	12.80	54.73	12.09	52.34	11.44	47.61	9.86	
24.0	22.4	66.65	14.30	61.90	12.97	57.14	11.65	54.73	11.02	52.34	10.46	47.61	9.04	
27.0	25.3	66.65	13.01	61.90	11.79	57.14	10.63	54.73	9.82	52.34	9.18	47.61	7.86	
30.0	28.1	66.65	11.83	61.90	10.71	57.14	9.70	54.73	8.75	52.34	8.06	47.61	6.84	
60%	-30.0	-30.5	32.64	15.37	32.18	15.85	31.27	15.61	30.67	15.32	30.10	15.17	28.79	14.72
	-25.0	-25.4	33.54	15.99	33.03	16.44	32.25	16.37	31.75	16.13	31.23	15.91	30.15	15.36
	-19.8	-20.0	34.33	16.58	33.79	16.98	33.11	17.09	32.67	16.89	32.20	16.58	31.11	15.80
	-18.8	-19.0	34.47	16.66	33.92	17.06	33.23	17.13	32.72	16.74	32.19	16.33	31.11	15.54
	-16.7	-17.0	34.73	16.83	34.17	17.22	33.23	16.61	32.72	16.24	32.19	15.82	31.11	15.01
	-13.7	-15.0	34.98	17.08	34.22	16.93	33.23	16.17	32.72	15.77	32.19	15.37	31.11	14.55
	-11.8	-13.0	35.17	17.05	34.22	16.33	33.23	15.56	32.72	15.17	32.20	14.78	31.11	14.04
	-9.8	-11.0	35.17	16.45	34.21	15.71	33.23	14.94	32.72	14.56	32.20	14.17	31.11	13.57
	-9.5	-10.0	35.17	16.05	34.21	15.32	33.23	14.57	32.72	14.17	32.20	13.82	31.11	13.24
	-8.5	-9.1	35.17	15.80	34.22	15.05	33.23	14.29	32.72	13.90	32.20	13.61	31.11	13.03
	-7.0	-7.6	35.17	15.31	34.22	14.58	33.23	13.81	32.72	13.54	32.20	13.25	31.11	12.63
	-5.0	-5.6	34.54	14.41	33.60	13.68	32.64	13.07	32.15	12.78	31.64	12.49	30.58	11.92
	-3.0	-3.7	35.56	14.01	34.59	13.31	33.59	12.77	33.08	12.49	32.54	12.19	31.45	11.63
	0.0	-0.7	38.68	14.06	37.62	13.50	36.52	12.91	35.96	12.62	35.37	12.32	34.17	13.04
	3.0	2.2	43.19	14.50	41.96	13.90	40.67	13.25	39.99	12.92	39.31	12.59	37.86	13.30
	5.0	4.1	46.87	14.94	45.47	14.26	44.01	13.58	43.26	13.24	42.45	14.38	40.27	13.38
	7.0	6.0	53.44	16.10	51.71	15.32	49.41	14.42	48.41	15.33	47.92	15.05	43.81	13.08
	9.0	7.9	54.73	15.58	52.24	14.66	50.46	15.15	49.96	14.76	47.92	13.94	43.81	12.28
	11.0	9.8	56.01	15.07	53.61	14.20	52.03	14.72	49.96	13.93	47.92	13.11	43.81	11.51
	13.0	11.8	56.50	14.28	54.67	15.03	52.03	14.00	49.96	13.08	47.92	12.27	43.81	10.81
15.0	13.7	57.92	15.58	56.26	14.63	52.03	13.14	49.96	12.26	47.92	11.58	43.81	10.21	
18.0	16.6	59.81	14.73	56.26	13.43	52.03	11.94	49.96	11.36	47.92	10.60	43.81	9.29	
21.0	19.5	59.81	13.45	56.26	12.37	52.03	11.00	49.96	10.38	47.92	9.84	43.81	8.44	
24.0	22.4	59.81	12.22	56.26	11.30	52.03	10.11	49.96	9.39	47.92	8.91	43.81	7.64	
27.0	25.3	59.81	11.14	56.26	9.94	52.03	9.00	49.96	8.25	47.92	7.67	43.81	6.65	
30.0	28.1	61.37	10.42	56.26	8.74	53.01	8.16	50.43	7.32	47.92	6.61	43.81	5.79	

**Abbreviations:**

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

**Notes:**

Shaded cells indicate rating condition.

Table continued on next page ...

Table2-8.23:26HP heating capacity(continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	
50%	-30.0	-30.5	28.49	14.46	27.71	14.24	26.92	14.02	26.52	13.87	26.11	13.76	25.29	13.46
	-25.0	-25.4	29.08	14.97	28.30	14.58	27.49	14.18	27.08	13.96	26.66	13.74	25.80	13.33
	-19.8	-20.0	29.59	15.46	28.81	14.89	28.00	14.32	27.58	14.02	27.16	13.69	26.26	13.17
	-18.8	-19.0	29.59	15.23	28.81	14.67	28.00	14.08	27.58	13.77	27.15	13.46	26.26	13.01
	-16.7	-17.0	29.59	14.78	28.81	14.19	28.00	13.59	27.58	13.28	27.16	13.05	26.27	12.65
	-13.7	-15.0	29.60	14.38	28.81	13.78	28.00	13.19	27.58	12.94	27.16	12.74	26.27	12.31
	-11.8	-13.0	29.59	13.82	28.81	13.24	28.00	12.73	27.58	12.51	27.15	12.28	26.26	11.84
	-9.8	-11.0	29.59	13.27	28.81	12.72	28.00	12.28	27.58	12.05	27.15	11.83	26.27	11.37
	-9.5	-10.0	29.60	12.94	28.81	12.42	28.00	11.98	27.58	11.77	27.15	11.54	26.27	11.09
	-8.5	-9.1	29.60	12.68	28.82	12.24	28.00	11.79	27.58	11.56	27.16	11.35	26.27	10.88
	-7.0	-7.6	29.59	12.30	28.82	11.89	28.00	11.44	27.59	11.23	27.16	11.00	26.26	11.65
	-5.0	-5.6	29.05	11.61	28.29	11.21	27.50	10.79	27.09	10.56	26.67	10.35	25.81	10.97
	-3.0	-3.7	29.93	11.35	29.14	10.96	28.32	10.54	27.89	10.31	27.45	11.21	26.55	10.70
	0.0	-0.7	32.23	11.26	31.35	10.83	30.44	11.57	29.97	11.32	29.48	11.06	28.47	10.52
	3.0	2.2	36.00	11.58	34.96	12.39	33.89	11.85	33.33	11.57	32.76	11.30	31.55	10.73
	5.0	4.1	39.06	11.90	37.89	12.72	36.66	12.13	36.03	11.81	35.38	11.51	33.56	10.64
	7.0	6.0	44.54	14.05	43.09	13.18	41.17	12.24	40.34	11.79	39.94	11.47	33.56	9.38
	9.0	7.9	45.65	13.52	43.50	12.51	42.05	11.76	41.63	11.44	39.94	10.83	33.56	8.89
	11.0	9.8	46.67	12.98	44.67	12.07	43.36	11.34	41.63	10.76	39.94	10.23	33.56	8.38
	13.0	11.8	47.08	12.27	45.56	11.50	43.36	10.65	41.99	10.20	40.16	9.64	36.57	8.57
15.0	13.7	48.26	11.97	46.89	11.23	43.36	10.06	41.99	9.60	40.16	9.04	36.57	8.00	
18.0	16.6	49.84	11.28	46.89	10.22	43.36	9.13	41.99	8.74	40.16	8.19	36.57	7.18	
21.0	19.5	49.84	10.26	47.80	9.79	43.36	8.26	41.99	7.84	40.16	7.33	36.57	6.51	
24.0	22.4	49.84	9.39	47.80	8.74	43.36	7.50	41.99	7.04	40.16	6.68	36.57	5.96	
27.0	25.3	49.84	8.15	47.80	7.50	43.84	6.61	41.99	6.24	40.16	5.94	36.57	5.30	
30.0	28.1	49.84	7.08	47.80	6.45	43.84	5.75	41.99	5.53	40.16	5.29	36.57	4.72	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table 2-8.24: 28HP heating capacity

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
130%	-30.0	-30.5	61.64	22.34	60.45	23.02	59.26	23.71	58.67	24.07	58.08	24.39	56.89	25.03
	-25.0	-25.4	61.64	22.53	60.45	23.12	59.26	23.72	58.67	24.01	58.08	24.29	56.89	24.86
	-19.8	-20.0	61.64	22.72	60.45	23.22	59.26	23.74	58.67	23.95	58.08	24.19	56.89	24.69
	-18.8	-19.0	61.64	22.72	60.45	23.19	59.26	23.67	58.67	23.90	58.08	24.17	56.89	24.61
	-16.7	-17.0	61.64	22.61	60.45	23.09	59.26	23.56	58.67	23.79	58.08	24.03	56.89	24.47
	-13.7	-15.0	61.64	22.66	60.45	23.15	59.26	23.58	58.67	23.80	58.54	24.22	57.49	24.71
	-11.8	-13.0	62.11	22.66	61.05	23.16	59.98	23.64	59.45	23.90	58.91	24.15	58.79	25.03
	-9.8	-11.0	62.51	22.61	62.41	23.45	61.43	24.00	60.94	24.26	60.45	24.54	59.47	25.06
	-9.5	-10.0	63.77	22.85	62.78	23.38	61.79	23.90	61.29	24.16	60.79	24.42	59.79	24.96
	-8.5	-9.1	64.10	22.89	63.10	23.42	62.09	23.93	61.59	24.17	61.09	24.45	60.07	24.96
	-7.0	-7.6	64.63	22.91	63.61	23.42	62.59	23.91	62.07	24.19	61.56	24.43	60.53	24.94
	-5.0	-5.6	64.24	22.54	63.21	23.02	62.17	23.51	61.65	23.76	61.13	24.01	60.08	24.49
	-3.0	-3.7	66.59	22.82	65.51	23.32	64.44	23.80	63.89	24.07	63.35	24.30	62.26	24.79
	0.0	-0.7	72.23	23.88	71.07	24.38	69.90	24.89	69.31	25.15	68.73	25.40	67.54	25.93
	3.0	2.2	80.98	25.82	79.70	26.40	78.41	26.97	77.76	27.25	77.11	27.53	75.80	28.09
	5.0	4.1	86.93	27.11	86.72	28.08	85.33	28.70	84.64	29.00	83.94	29.31	82.54	29.93
	7.0	6.0	101.37	30.95	99.42	31.53	97.47	32.11	96.50	32.39	95.53	32.66	93.58	32.95
	9.0	7.9	104.62	31.27	102.61	31.87	100.59	32.44	99.59	32.74	98.58	33.03	93.58	31.14
	11.0	9.8	107.86	31.58	105.79	32.19	103.71	32.78	102.68	33.07	101.64	33.37	93.58	29.44
	13.0	11.8	111.11	31.84	108.97	32.46	106.83	33.08	105.76	33.38	101.64	33.86	94.86	28.11
	15.0	13.7	114.35	32.13	112.15	32.77	109.95	33.42	108.85	33.13	101.64	30.08	94.86	26.45
	18.0	16.6	119.22	32.57	116.92	33.26	109.95	31.53	108.85	30.32	101.64	27.50	94.86	24.13
21.0	19.5	124.08	32.99	121.70	33.68	109.95	28.85	109.04	27.75	101.64	25.10	94.86	22.03	
24.0	22.4	128.95	33.47	123.21	31.26	113.79	27.25	109.04	25.30	101.64	22.79	94.86	20.15	
27.0	25.3	133.81	32.83	123.21	28.54	113.79	24.76	109.04	22.92	101.64	20.78	94.86	18.31	
30.0	28.1	135.82	31.49	123.21	26.07	113.79	22.51	109.04	20.76	104.40	19.47	94.86	16.64	
120%	-30.0	-30.5	58.92	21.93	57.79	22.58	56.66	23.25	56.09	23.58	55.52	23.92	54.39	24.54
	-25.0	-25.4	58.92	22.08	57.79	22.65	56.66	23.23	56.09	23.51	55.52	23.80	54.39	24.35
	-19.8	-20.0	58.92	22.24	57.79	22.72	56.66	23.21	56.09	23.44	55.52	23.69	54.39	24.17
	-18.8	-19.0	58.92	22.22	57.79	22.72	56.66	23.16	56.09	23.42	55.52	23.63	54.39	24.10
	-16.7	-17.0	58.92	22.19	57.79	22.62	56.66	23.08	56.09	23.28	55.52	23.53	54.89	24.18
	-13.7	-15.0	58.92	22.21	58.28	22.83	57.27	23.34	56.76	23.57	56.25	23.81	56.09	24.69
	-11.8	-13.0	59.69	22.29	59.53	23.12	58.61	23.65	58.14	23.92	57.68	24.19	56.75	24.73
	-9.8	-11.0	61.19	22.70	60.24	23.22	59.28	23.73	58.81	24.00	58.33	24.23	57.37	24.76
	-9.5	-10.0	61.54	22.61	60.58	23.11	59.61	23.63	59.13	23.88	58.64	24.14	57.67	24.63
	-8.5	-9.1	61.85	22.66	60.87	23.14	59.90	23.65	59.41	23.91	58.91	24.17	57.93	24.66
	-7.0	-7.6	62.34	22.67	61.35	23.16	60.35	23.66	59.85	23.90	59.35	24.15	58.35	24.66
	-5.0	-5.6	61.92	22.30	60.92	22.77	59.91	23.24	59.40	23.48	58.90	23.72	57.88	24.21
	-3.0	-3.7	64.18	22.59	63.14	23.06	62.09	23.55	61.57	23.78	61.04	24.01	59.98	24.52
	0.0	-0.7	69.64	23.65	68.51	24.16	67.37	24.67	66.80	24.90	66.23	25.17	65.09	25.66
	3.0	2.2	78.12	25.68	76.87	26.24	75.62	26.77	74.99	27.06	74.36	27.33	72.95	27.63
	5.0	4.1	85.01	27.34	83.67	27.95	82.33	28.55	81.65	28.85	80.97	29.16	78.74	28.24
	7.0	6.0	96.91	30.58	95.05	31.12	93.19	31.68	92.26	31.96	91.32	32.22	87.74	29.76
	9.0	7.9	100.02	30.90	98.09	31.49	96.17	32.06	95.21	32.34	94.25	31.78	87.74	28.14
	11.0	9.8	103.12	31.24	101.13	31.84	99.15	32.42	98.16	32.07	94.25	30.04	87.74	26.53
	13.0	11.8	106.22	31.56	104.18	32.17	102.13	32.24	98.16	30.23	94.25	28.28	87.74	24.90
	15.0	13.7	109.32	31.87	107.22	32.52	105.12	31.36	98.16	28.51	94.25	26.67	87.74	23.42
	18.0	16.6	113.97	32.38	111.78	32.11	105.12	28.69	100.66	26.72	94.25	24.32	87.74	21.47
21.0	19.5	118.62	32.83	111.78	29.38	105.12	26.16	100.66	24.35	94.25	22.11	87.74	19.66	
24.0	22.4	122.57	31.03	111.78	26.79	105.12	23.76	100.66	22.15	94.25	20.26	87.74	17.87	
27.0	25.3	122.57	28.32	113.75	24.79	105.12	21.63	100.66	20.18	94.25	18.42	87.74	16.14	
30.0	28.1	122.57	25.85	113.75	22.53	105.13	19.69	100.66	18.38	96.42	17.14	87.74	14.58	

Abbreviations:  
 CR: Combination ratio  
 TC: Total capacity (kW)  
 PI: Power input (compressor + outdoor fan motor) (kW)  
 Notes:  
 Shaded cells indicate rating condition.

Table continued on next page ...

Table 2-8.24: 28HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
110%	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	
	-30.0	-30.5	55.66	21.28	54.59	21.92	53.52	22.52	52.98	22.89	52.45	23.17	51.38	23.75
	-25.0	-25.4	55.66	21.43	54.59	21.97	53.52	22.52	52.98	22.80	52.45	23.06	51.38	23.58
	-19.8	-20.0	55.66	21.57	54.59	22.01	53.52	22.51	52.98	22.72	52.45	22.95	51.38	23.42
	-18.8	-19.0	55.66	21.55	54.59	22.01	53.52	22.46	52.98	22.66	52.45	22.90	51.87	23.58
	-16.7	-17.0	55.66	21.51	55.07	22.13	54.12	22.60	53.64	22.86	53.16	23.10	53.03	23.96
	-13.7	-15.0	56.40	21.84	56.27	22.64	55.40	23.18	54.97	23.44	54.53	23.70	53.66	24.25
	-11.8	-13.0	57.84	22.23	56.95	22.71	56.05	23.24	55.60	23.50	55.16	23.76	54.26	24.28
	-9.8	-11.0	58.51	22.32	57.59	22.80	56.67	23.31	56.21	23.54	55.74	23.79	54.81	24.32
	-9.5	-10.0	58.83	22.22	57.89	22.70	56.96	23.19	56.49	23.45	56.02	23.68	55.08	24.19
	-8.5	-9.1	59.10	22.25	58.16	22.74	57.22	23.22	56.74	23.46	56.27	23.71	55.32	24.20
	-7.0	-7.6	59.55	22.27	58.59	22.75	57.63	23.22	57.15	23.48	56.66	23.71	55.70	24.20
	-5.0	-5.6	59.10	21.91	58.13	22.36	57.16	22.82	56.67	23.05	56.18	23.28	55.21	23.76
	-3.0	-3.7	61.25	22.21	60.25	22.68	59.24	23.13	58.73	23.37	58.22	23.59	57.21	24.06
	0.0	-0.7	66.45	23.32	65.37	23.80	64.27	24.28	63.72	24.53	63.17	24.77	61.73	24.52
	3.0	2.2	74.60	25.37	73.40	25.91	72.18	26.46	71.58	26.72	70.97	26.98	68.46	25.03
	5.0	4.1	81.26	27.09	79.96	27.68	78.66	28.26	78.00	28.55	76.76	27.74	73.82	25.49
	7.0	6.0	91.55	29.94	90.60	30.76	88.99	31.36	87.86	30.70	86.26	29.51	80.27	26.16
	9.0	7.9	95.19	30.56	93.54	31.16	91.61	30.97	89.93	29.75	86.26	27.89	80.27	24.70
	11.0	9.8	98.20	30.95	96.49	31.58	93.66	29.95	92.30	28.85	86.26	26.34	80.27	23.22
	13.0	11.8	101.24	31.31	99.24	31.26	93.66	28.17	92.30	27.13	86.26	24.67	80.27	21.91
15.0	13.7	104.25	31.70	101.28	30.13	93.66	26.59	92.30	25.53	86.26	23.21	80.27	20.72	
18.0	16.6	107.66	30.73	104.31	28.40	93.66	24.22	92.30	23.22	86.26	21.26	80.27	18.98	
21.0	19.5	112.05	29.22	104.31	25.87	93.66	22.04	92.30	21.26	86.26	19.45	80.27	17.29	
24.0	22.4	112.31	26.68	104.31	23.49	93.66	20.15	92.30	19.42	86.26	17.70	80.27	15.64	
27.0	25.3	112.31	24.22	104.31	21.39	93.66	18.32	92.30	17.61	86.26	15.99	80.27	16.42	
30.0	28.1	112.31	21.98	104.31	19.47	96.44	17.16	92.30	15.97	88.37	14.80	80.27	17.25	
100%	-30.0	-30.5	55.33	21.77	54.26	22.45	53.20	23.11	52.67	23.39	52.14	23.73	51.07	24.35
	-25.0	-25.4	55.33	21.91	54.26	22.49	53.20	23.05	52.67	23.31	52.14	23.60	51.07	24.14
	-19.8	-20.0	55.33	22.06	54.26	22.53	53.20	22.99	52.67	23.22	52.14	23.47	51.07	23.93
	-18.8	-19.0	55.33	22.06	54.26	22.49	53.20	22.97	52.67	23.18	52.14	23.42	51.57	24.11
	-16.7	-17.0	55.33	21.99	54.74	22.63	53.79	23.12	53.32	23.36	52.84	23.64	52.72	24.51
	-13.7	-15.0	56.06	22.34	55.93	23.15	55.07	23.71	54.64	23.97	54.21	24.24	53.35	24.80
	-11.8	-13.0	57.49	22.76	56.61	23.27	55.72	23.81	55.27	24.06	54.83	24.31	53.94	24.87
	-9.8	-11.0	58.16	22.85	57.25	23.36	56.33	23.88	55.87	24.14	55.41	24.38	54.50	24.90
	-9.5	-10.0	58.47	22.79	57.55	23.26	56.62	23.77	56.16	24.02	55.69	24.29	54.76	24.80
	-8.5	-9.1	58.75	22.83	57.82	23.31	56.88	23.80	56.41	24.06	55.94	24.31	55.00	24.83
	-7.0	-7.6	59.19	22.86	58.24	23.34	57.29	23.83	56.81	24.08	56.33	24.34	55.37	24.84
	-5.0	-5.6	58.72	22.52	57.77	22.99	56.81	23.46	56.32	23.70	55.84	23.94	54.71	24.06
	-3.0	-3.7	60.85	22.89	59.85	23.34	58.85	23.81	58.35	24.06	57.85	24.30	56.25	23.46
	0.0	-0.7	66.01	24.05	64.93	24.56	63.85	25.04	63.31	25.29	62.46	24.89	60.24	23.07
	3.0	2.2	74.10	26.23	72.90	26.78	71.70	27.31	70.48	26.34	69.22	25.38	66.59	23.39
	5.0	4.1	80.70	28.04	79.41	28.63	77.44	27.93	76.05	26.90	73.58	25.48	71.06	23.56
	7.0	6.0	91.00	31.05	90.01	31.86	87.50	29.86	84.09	28.14	80.27	26.23	71.06	22.18
	9.0	7.9	93.91	31.49	92.11	30.94	87.50	28.20	84.09	26.54	80.27	24.77	71.06	21.05
	11.0	9.8	97.55	32.16	92.11	29.21	87.50	26.60	84.09	25.00	80.27	23.31	71.06	19.92
	13.0	11.8	99.74	31.06	92.11	27.49	87.50	24.98	84.09	23.46	80.27	21.97	71.06	18.82
	15.0	13.7	99.74	29.31	92.11	25.90	87.50	23.49	84.09	22.15	80.27	20.77	71.06	17.76
18.0	16.6	99.74	26.76	94.86	24.34	87.50	21.52	84.09	20.29	80.27	19.02	74.36	17.57	
21.0	19.5	99.74	24.38	94.86	22.15	87.56	19.69	84.09	18.55	80.27	17.33	74.36	15.32	
24.0	22.4	99.74	22.11	94.86	20.24	87.56	17.90	84.09	16.79	80.27	15.69	74.36	16.06	
27.0	25.3	99.74	20.21	94.86	18.36	87.56	16.16	84.09	15.13	80.27	16.43	74.36	14.66	
30.0	28.1	102.24	18.94	94.86	16.66	87.56	14.58	84.09	13.65	80.27	17.21	74.36	13.38	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

# MDV8 ECO VRF 50Hz



Table 2-8.24: 28HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
90%	-30.0	-30.5	49.80	20.23	48.84	20.89	47.88	21.43	47.40	21.72	46.92	22.03	45.96	22.53
	-25.0	-25.4	49.80	20.38	48.84	20.92	47.88	21.41	47.40	21.66	46.92	21.92	45.96	22.40
	-19.8	-20.0	50.30	20.73	49.45	21.22	48.59	21.70	48.94	22.29	48.56	22.58	47.82	23.17
	-18.8	-19.0	50.47	20.78	50.38	21.60	49.62	22.13	49.24	22.40	48.86	22.66	48.10	23.24
	-16.7	-17.0	51.79	21.27	51.00	21.79	50.21	22.31	49.82	22.58	49.42	22.82	48.63	23.38
	-13.7	-15.0	52.40	21.60	51.59	22.09	50.77	22.59	50.36	22.86	49.96	23.11	49.14	23.65
	-11.8	-13.0	52.97	21.70	52.14	22.18	51.30	22.67	50.88	22.93	50.46	23.17	49.62	23.68
	-9.8	-11.0	53.50	21.80	52.65	22.27	51.79	22.74	51.36	22.99	50.93	23.23	50.07	23.73
	-9.5	-10.0	53.75	21.73	52.89	22.19	52.02	22.67	51.59	22.91	51.15	23.15	50.10	23.23
	-8.5	-9.1	53.97	21.77	53.10	22.24	52.22	22.71	51.78	22.94	51.34	23.18	50.09	22.85
	-7.0	-7.6	54.32	21.83	53.44	22.28	52.55	22.76	52.10	22.97	51.65	23.20	50.10	22.18
	-5.0	-5.6	53.82	21.50	52.92	21.95	52.03	22.38	51.58	22.61	50.94	22.36	49.24	20.92
	-3.0	-3.7	55.76	21.86	54.83	22.30	53.90	22.75	53.26	22.56	52.41	21.84	50.63	20.37
	0.0	-0.7	60.51	23.05	59.51	23.52	58.09	22.99	57.17	22.26	56.21	21.51	54.21	19.94
	3.0	2.2	68.04	25.23	66.65	25.11	64.54	23.50	63.42	22.67	62.30	21.85	59.94	20.23
	5.0	4.1	74.21	27.06	72.11	25.73	69.69	23.97	68.45	23.10	66.22	21.89	63.96	20.49
	7.0	6.0	84.57	29.54	81.03	27.33	78.75	25.59	75.55	24.03	73.61	22.98	63.96	19.43
	9.0	7.9	85.54	28.26	82.90	26.39	78.75	24.08	75.55	22.64	73.61	21.77	63.96	18.40
	11.0	9.8	87.82	27.40	82.90	24.90	78.75	22.66	75.55	21.46	73.61	20.63	63.96	17.37
	13.0	11.8	89.76	26.32	82.90	23.32	78.82	21.43	75.55	20.24	73.61	19.43	63.96	16.39
15.0	13.7	91.95	25.39	82.90	21.94	78.82	20.25	75.55	19.14	73.61	18.37	63.96	15.40	
18.0	16.6	91.95	23.10	82.90	20.17	78.82	18.57	75.55	17.46	73.61	17.40	63.96	15.95	
21.0	19.5	91.95	21.10	82.90	18.42	78.82	16.88	75.55	15.84	73.61	15.13	63.96	14.59	
24.0	22.4	91.95	19.27	82.90	16.71	78.82	15.23	75.55	16.52	73.61	15.86	63.96	13.30	
27.0	25.3	91.95	17.45	82.90	15.03	78.82	15.98	75.55	15.08	73.61	14.46	63.96	12.11	
30.0	28.1	91.95	15.81	85.46	13.95	78.82	16.77	75.55	13.77	73.61	13.19	65.76	11.34	
80%	-30.0	-30.5	44.26	18.72	43.41	19.27	42.56	19.78	42.13	20.03	41.71	20.29	40.86	20.57
	-25.0	-25.4	44.26	18.84	43.84	19.50	43.10	20.01	42.73	20.27	43.01	20.86	42.24	21.27
	-19.8	-20.0	46.48	19.91	45.78	20.41	45.07	20.90	44.72	21.16	44.37	21.44	43.66	21.98
	-18.8	-19.0	46.75	20.02	46.03	20.50	45.31	20.99	44.96	21.26	44.60	21.51	43.89	22.04
	-16.7	-17.0	47.26	20.20	46.52	20.69	45.79	21.17	45.42	21.40	45.05	21.65	44.31	22.17
	-13.7	-15.0	47.73	20.51	46.97	20.97	46.22	21.44	45.84	21.69	45.46	21.93	44.53	22.04
	-11.8	-13.0	48.17	20.63	47.40	21.06	46.62	21.53	46.23	21.76	45.84	22.00	44.53	21.27
	-9.8	-11.0	48.59	20.70	47.80	21.16	47.00	21.60	46.61	21.83	46.09	21.78	44.54	20.50
	-9.5	-10.0	48.79	20.64	47.99	21.08	47.19	21.52	46.79	21.75	46.08	21.26	44.53	20.00
	-8.5	-9.1	48.96	20.71	48.15	21.14	47.34	21.57	46.84	21.53	46.08	20.89	44.54	19.64
	-7.0	-7.6	49.24	20.76	48.42	21.18	47.56	21.51	46.83	20.90	46.08	20.30	44.53	19.03
	-5.0	-5.6	48.71	20.44	47.89	20.85	46.72	20.30	46.01	19.72	45.29	19.13	43.77	17.90
	-3.0	-3.7	50.46	20.80	49.53	21.01	48.09	19.83	47.34	19.22	46.59	18.63	45.00	17.39
	0.0	-0.7	54.77	21.95	53.23	20.74	51.63	19.51	50.81	18.88	49.97	18.27	48.19	17.16
	3.0	2.2	61.04	22.54	59.24	21.21	57.36	19.84	56.38	19.16	55.38	18.59	53.28	17.50
	5.0	4.1	66.13	23.07	64.08	21.66	61.96	20.22	60.86	19.62	58.87	18.75	56.85	17.71
	7.0	6.0	75.16	24.81	72.03	22.93	70.00	21.61	68.41	20.90	64.24	19.38	58.40	17.22
	9.0	7.9	76.03	23.65	73.68	22.08	70.00	20.50	68.41	19.80	64.24	18.35	58.40	16.25
	11.0	9.8	78.06	22.85	73.68	20.92	70.00	19.40	68.41	18.76	64.24	17.36	58.40	15.35
	13.0	11.8	79.79	21.90	73.68	19.72	70.00	18.30	68.41	17.61	64.24	16.31	58.40	16.01
15.0	13.7	79.79	20.72	75.92	19.21	70.00	17.26	68.41	16.61	64.24	15.36	58.40	15.20	
18.0	16.6	81.71	19.46	75.92	17.57	71.38	16.65	68.41	15.69	64.24	15.91	58.40	14.05	
21.0	19.5	81.71	17.70	75.92	15.93	71.38	16.62	68.41	15.69	64.24	14.54	58.40	12.81	
24.0	22.4	81.71	16.02	75.92	14.33	71.38	15.17	68.41	14.32	64.24	13.27	58.40	11.71	
27.0	25.3	81.71	14.36	75.92	15.14	71.38	13.83	68.41	13.04	64.24	12.07	58.40	10.40	
30.0	28.1	81.71	12.87	75.92	15.99	71.38	12.60	68.41	11.88	64.24	10.98	58.40	9.24	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...



Table 2-8.24: 28HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB												
			16.0		18.0		20.0		21.0		22.0		24.0		
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	
70%	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
	-30.0	-30.5	38.73	17.14	38.38	17.76	37.74	18.26	37.98	18.81	36.96	18.55	35.75	17.84	
	-25.0	-25.4	40.65	18.12	40.05	18.63	39.46	19.16	39.16	19.44	38.74	19.54	37.34	18.86	
	-19.8	-20.0	41.83	18.79	41.18	19.26	40.53	19.75	40.21	20.00	39.88	20.23	38.79	19.83	
	-18.8	-19.0	42.03	18.90	41.37	19.36	40.71	19.84	40.38	20.08	40.05	20.30	38.97	19.88	
	-16.7	-17.0	42.41	19.10	41.74	19.53	41.06	20.00	40.72	20.22	40.33	20.32	38.96	19.26	
	-13.7	-15.0	42.78	19.39	42.08	19.81	41.39	20.25	40.98	20.33	40.33	19.82	38.96	18.75	
	-11.8	-13.0	43.12	19.48	42.41	19.90	41.62	20.12	40.98	19.62	40.33	19.11	38.97	18.04	
	-9.8	-11.0	43.44	19.58	42.71	19.99	41.62	19.40	40.98	18.89	40.33	18.37	38.96	17.31	
	-9.5	-10.0	43.59	19.54	42.86	19.94	41.62	18.93	40.98	18.44	40.32	17.91	38.97	16.85	
	-8.5	-9.1	43.72	19.58	42.86	19.61	41.62	18.63	40.98	18.14	40.32	17.59	38.96	16.53	
	-7.0	-7.6	43.93	19.63	42.86	19.06	41.62	18.07	40.98	17.55	40.33	17.04	38.96	16.06	
	-5.0	-5.6	43.26	18.89	42.09	17.95	40.89	16.99	40.26	16.48	39.63	16.01	38.29	15.17	
	-3.0	-3.7	44.55	18.46	43.33	17.50	42.08	16.53	41.43	16.03	40.77	15.61	39.38	14.82	
	0.0	-0.7	47.93	18.22	46.58	17.23	45.18	16.23	44.46	15.83	43.72	15.43	42.17	14.62	
	3.0	2.2	53.41	18.61	51.84	17.50	50.19	16.64	49.35	16.24	48.46	15.80	46.62	14.92	
	5.0	4.1	57.86	19.00	56.08	17.97	54.23	17.09	53.24	16.60	51.51	15.90	49.74	15.05	
	7.0	6.0	65.78	20.38	63.02	19.14	61.25	18.25	58.76	17.33	56.19	16.42	51.12	16.04	
	9.0	7.9	66.52	19.53	64.47	18.53	61.34	17.31	58.76	16.38	56.19	15.36	51.12	14.96	
	11.0	9.8	68.31	18.99	66.46	18.09	61.34	16.32	58.76	15.46	56.19	16.13	51.12	14.12	
	13.0	11.8	69.82	18.27	66.46	17.01	61.34	15.31	58.76	16.14	56.19	15.19	51.12	13.24	
	15.0	13.7	69.82	17.21	66.46	16.03	61.34	16.33	58.76	15.32	56.19	14.31	51.12	12.45	
	18.0	16.6	71.56	16.10	66.46	16.56	61.34	14.95	58.76	14.13	56.19	13.20	51.12	11.52	
	21.0	19.5	71.56	14.53	66.46	15.15	61.34	13.64	58.76	12.89	56.19	12.20	51.12	10.52	
24.0	22.4	71.56	15.24	66.46	13.82	61.34	12.42	58.76	11.76	56.19	11.17	51.12	9.64		
27.0	25.3	71.56	13.86	66.46	12.56	61.34	11.32	58.76	10.47	56.19	9.79	51.12	8.40		
30.0	28.1	71.56	12.60	66.46	11.41	61.34	10.31	58.76	9.31	56.19	8.59	51.12	7.31		
60%	-30.0	-30.5	35.04	16.37	34.55	16.89	33.57	16.63	32.92	16.32	32.32	16.15	30.90	15.68	
	-25.0	-25.4	36.01	17.04	35.46	17.52	34.63	17.45	34.08	17.20	33.53	16.95	32.37	16.37	
	-19.8	-20.0	36.86	17.67	36.28	18.10	35.55	18.22	35.08	18.02	34.57	17.69	33.40	16.85	
	-18.8	-19.0	37.01	17.76	36.41	18.19	35.67	18.26	35.13	17.85	34.56	17.40	33.40	16.58	
	-16.7	-17.0	37.29	17.94	36.68	18.36	35.67	17.71	35.13	17.32	34.56	16.87	33.40	16.00	
	-13.7	-15.0	37.55	18.21	36.74	18.04	35.67	17.24	35.13	16.81	34.56	16.38	33.40	15.52	
	-11.8	-13.0	37.76	18.18	36.74	17.41	35.67	16.59	35.12	16.16	34.57	15.75	33.40	14.99	
	-9.8	-11.0	37.76	17.54	36.73	16.75	35.67	15.94	35.13	15.51	34.57	15.10	33.40	14.45	
	-9.5	-10.0	37.76	17.11	36.73	16.34	35.68	15.53	35.13	15.12	34.57	14.73	33.40	14.12	
	-8.5	-9.1	37.76	16.84	36.74	16.05	35.67	15.23	35.13	14.82	34.57	14.51	33.40	13.88	
	-7.0	-7.6	37.76	16.32	36.74	15.54	35.67	14.72	35.13	14.44	34.57	14.12	33.40	13.47	
	-5.0	-5.6	37.08	15.35	36.08	14.59	35.05	13.94	34.51	13.63	33.97	13.31	32.83	12.70	
	-3.0	-3.7	38.18	14.92	37.14	14.20	36.06	13.61	35.52	13.31	34.94	13.00	33.76	12.41	
	0.0	-0.7	41.08	14.69	39.93	14.10	38.73	13.47	38.11	13.15	37.47	12.84	36.14	13.57	
	3.0	2.2	45.78	15.12	44.44	14.48	43.03	13.79	42.29	13.44	41.54	13.09	39.95	13.80	
	5.0	4.1	49.61	15.56	48.08	14.84	46.47	14.10	45.65	13.74	44.15	14.71	42.64	13.93	
	7.0	6.0	56.38	16.71	54.02	15.74	52.50	15.08	51.20	15.94	48.34	14.94	43.82	12.87	
	9.0	7.9	57.02	15.97	55.26	15.26	52.50	15.51	52.84	15.36	48.34	13.83	43.82	12.09	
	11.0	9.8	58.55	15.49	56.98	14.85	52.50	14.61	52.84	14.50	48.34	13.01	43.82	11.33	
	13.0	11.8	59.84	14.88	56.98	15.41	52.50	13.89	52.84	13.61	48.34	12.18	43.82	10.64	
	15.0	13.7	59.84	15.84	56.98	14.58	52.50	13.04	52.84	12.75	48.34	11.49	43.82	10.05	
	18.0	16.6	59.84	14.50	56.98	13.37	52.50	11.85	52.84	11.82	48.34	10.52	43.82	9.14	
	21.0	19.5	59.84	13.24	56.98	12.32	52.50	10.92	52.84	10.80	48.34	9.76	43.82	8.30	
	24.0	22.4	59.84	12.03	56.98	11.26	52.50	10.03	52.84	9.77	48.34	8.84	43.82	7.52	
27.0	25.3	59.84	10.96	56.98	9.90	52.50	8.93	52.84	8.58	48.34	7.61	43.82	6.54		
30.0	28.1	65.04	10.86	56.98	8.71	56.09	8.50	53.33	7.61	48.34	6.56	43.82	5.70		

**Abbreviations:**

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

**Notes:**

Shaded cells indicate rating condition.

Table continued on next page ...

Table 2-8.24: 28HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
50%	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
	-30.0	-30.5	30.19	15.08	29.35	14.84	28.49	14.59	28.05	14.43	27.60	14.31	26.71	13.98
	-25.0	-25.4	30.87	15.63	30.02	15.22	29.15	14.79	28.70	14.55	28.24	14.32	27.29	13.87
	-19.8	-20.0	31.46	16.16	30.61	15.57	29.73	14.95	29.28	14.63	28.81	14.29	27.83	13.73
	-18.8	-19.0	31.46	15.93	30.61	15.33	29.73	14.71	29.28	14.38	28.80	14.04	27.83	13.56
	-16.7	-17.0	31.46	15.45	30.61	14.83	29.73	14.20	29.27	13.86	28.81	13.62	27.84	13.19
	-13.7	-15.0	31.47	15.04	30.61	14.40	29.73	13.77	29.27	13.51	28.81	13.29	27.84	12.83
	-11.8	-13.0	31.46	14.45	30.61	13.84	29.73	13.29	29.27	13.06	28.81	12.82	27.83	12.34
	-9.8	-11.0	31.46	13.88	30.62	13.29	29.73	12.83	29.28	12.58	28.81	12.35	27.83	11.85
	-9.5	-10.0	31.47	13.53	30.61	12.98	29.73	12.52	29.28	12.29	28.80	12.04	27.83	11.56
	-8.5	-9.1	31.47	13.27	30.62	12.79	29.73	12.31	29.27	12.07	28.81	11.84	27.83	11.34
	-7.0	-7.6	31.46	12.87	30.62	12.42	29.73	11.95	29.28	11.72	28.81	11.48	27.83	12.14
	-5.0	-5.6	30.89	12.14	30.07	11.72	29.20	11.27	28.76	11.03	28.30	10.80	27.35	11.44
	-3.0	-3.7	31.82	11.87	30.96	11.45	30.06	11.01	29.59	10.76	29.12	11.70	28.13	11.15
	0.0	-0.7	34.23	11.77	33.27	11.30	32.27	12.07	31.76	11.80	31.22	11.52	30.12	10.95
	3.0	2.2	38.16	12.08	37.02	12.91	35.85	12.33	35.25	12.04	34.62	11.75	33.29	11.13
	5.0	4.1	41.34	12.39	40.06	13.23	38.72	12.60	38.02	12.26	36.79	11.77	35.53	11.09
	7.0	6.0	46.98	14.58	45.01	13.55	43.75	12.79	40.37	11.61	40.16	11.34	35.53	9.77
	9.0	7.9	47.54	13.85	46.05	13.02	43.75	12.03	41.66	11.26	40.16	10.71	35.53	9.26
	11.0	9.8	48.79	13.35	47.48	12.62	43.75	11.26	41.66	10.59	40.16	10.12	35.53	8.73
13.0	11.8	49.87	12.79	47.48	11.80	43.75	10.57	42.01	10.04	40.18	9.49	36.59	8.43	
15.0	13.7	49.87	12.16	47.48	11.19	43.75	9.99	42.01	9.44	40.18	8.90	36.59	7.87	
18.0	16.6	49.87	11.10	47.48	10.19	43.75	9.07	42.01	8.60	40.18	8.06	36.59	7.07	
21.0	19.5	49.87	10.10	47.82	9.64	43.75	8.20	42.01	7.72	40.18	7.22	36.59	6.41	
24.0	22.4	49.87	9.24	47.82	8.60	43.75	7.45	42.01	6.93	40.18	6.57	36.59	5.87	
27.0	25.3	49.87	8.03	47.82	7.39	43.86	6.50	42.01	6.14	40.18	5.85	36.59	5.22	
30.0	28.1	49.87	6.97	47.82	6.34	43.86	5.66	42.01	5.45	40.18	5.20	36.59	4.64	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table2-8.25:30HP heating capacity

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
130%	-30.0	-30.5	66.92	25.51	65.63	26.25	64.34	27.01	63.70	27.45	63.06	27.80	61.77	28.43
	-25.0	-25.4	66.92	25.67	65.63	26.33	64.34	26.99	63.70	27.33	63.06	27.64	61.77	28.23
	-19.8	-20.0	66.92	25.84	65.63	26.40	64.34	26.97	63.70	27.22	63.06	27.47	61.77	28.02
	-18.8	-19.0	66.92	25.85	65.63	26.36	64.34	26.92	63.70	27.18	63.06	27.43	61.77	27.92
	-16.7	-17.0	66.92	25.74	65.63	26.26	64.34	26.77	63.70	27.01	63.06	27.28	62.39	28.04
	-13.7	-15.0	66.92	25.79	66.23	26.52	65.09	27.09	64.51	27.36	63.94	27.65	63.81	28.64
	-11.8	-13.0	67.82	25.92	67.69	26.89	66.65	27.49	66.12	27.78	65.60	28.08	64.55	28.69
	-9.8	-11.0	69.57	26.37	68.49	26.95	67.42	27.54	66.88	27.84	66.34	28.14	65.26	28.72
	-9.5	-10.0	69.96	26.27	68.88	26.85	67.79	27.43	67.24	27.71	66.69	28.01	65.59	28.59
	-8.5	-9.1	70.31	26.30	69.22	26.87	68.11	27.45	67.56	27.73	67.00	28.01	65.89	28.60
	-7.0	-7.6	70.87	26.30	69.75	26.88	68.63	27.44	68.06	27.73	67.50	28.02	66.36	28.58
	-5.0	-5.6	70.39	25.87	69.26	26.41	68.12	26.95	67.55	27.24	66.98	27.50	65.83	28.03
	-3.0	-3.7	72.97	26.18	71.79	26.73	70.60	27.28	70.01	27.56	69.41	27.83	68.22	28.39
	0.0	-0.7	79.18	27.38	77.90	27.96	76.62	28.54	75.97	28.83	75.33	29.13	74.03	29.70
	3.0	2.2	88.86	29.67	87.45	30.32	86.03	30.95	85.32	31.28	84.60	31.60	83.16	32.22
	5.0	4.1	96.72	31.61	95.21	32.29	93.69	33.00	92.93	33.32	92.16	33.68	90.19	33.62
	7.0	6.0	110.06	35.20	107.95	35.84	105.83	36.49	104.77	36.80	104.51	37.40	101.60	35.92
	9.0	7.9	113.59	35.56	111.40	36.25	109.22	36.89	108.12	37.23	107.90	37.82	101.60	34.04
	11.0	9.8	117.11	35.93	114.86	36.61	112.60	37.29	112.34	37.91	110.35	36.64	101.60	32.20
	13.0	11.8	120.63	36.26	118.31	36.94	116.87	37.93	114.83	36.83	113.23	35.51	102.95	30.74
	15.0	13.7	124.15	36.59	121.76	37.33	119.38	37.09	118.18	35.89	113.23	33.56	102.95	29.02
	18.0	16.6	129.43	37.09	126.95	37.84	119.38	34.09	118.18	32.91	113.23	30.75	102.95	26.45
21.0	19.5	134.72	37.60	132.13	36.30	119.38	31.21	118.18	30.11	113.23	28.10	102.95	24.08	
24.0	22.4	140.00	36.97	133.79	33.66	119.38	28.51	118.18	27.45	113.23	25.56	102.95	22.04	
27.0	25.3	140.00	33.85	133.79	30.69	119.38	25.95	118.18	24.96	113.23	23.25	102.95	20.06	
30.0	28.1	140.00	30.99	133.79	27.99	123.52	24.44	118.18	22.70	113.23	21.15	102.95	18.26	
120%	-30.0	-30.5	63.97	24.95	62.74	25.75	61.51	26.49	60.90	26.83	60.28	27.13	59.05	27.84
	-25.0	-25.4	63.97	25.13	62.74	25.79	61.51	26.43	60.90	26.72	60.28	27.00	59.05	27.61
	-19.8	-20.0	63.97	25.31	62.74	25.82	61.51	26.37	60.90	26.61	60.28	26.88	59.05	27.38
	-18.8	-19.0	63.97	25.28	62.74	25.80	61.51	26.31	60.90	26.55	60.28	26.81	59.58	27.56
	-16.7	-17.0	63.97	25.21	63.23	25.90	62.14	26.46	61.60	26.76	61.05	27.03	60.87	27.98
	-13.7	-15.0	64.76	25.55	63.65	26.09	63.58	27.09	63.08	27.38	62.59	27.69	61.60	28.32
	-11.8	-13.0	66.36	26.00	65.35	26.59	64.33	27.16	63.82	27.46	63.31	27.76	62.29	28.35
	-9.8	-11.0	67.14	26.07	66.09	26.64	65.04	27.23	64.52	27.50	63.99	27.79	62.94	28.38
	-9.5	-10.0	67.51	25.96	66.45	26.53	65.39	27.09	64.85	27.38	64.32	27.66	63.25	28.24
	-8.5	-9.1	67.83	25.99	66.76	26.56	65.68	27.12	65.15	27.40	64.60	27.69	63.52	28.26
	-7.0	-7.6	68.35	26.03	67.26	26.57	66.16	27.12	65.61	27.40	65.06	27.68	63.96	28.23
	-5.0	-5.6	67.84	25.57	66.74	26.09	65.63	26.63	65.08	26.89	64.52	27.16	63.41	27.71
	-3.0	-3.7	70.32	25.91	69.17	26.45	68.02	26.97	67.44	27.25	66.86	27.52	65.71	28.05
	0.0	-0.7	76.31	27.14	75.07	27.71	73.83	28.27	73.20	28.55	72.58	28.83	71.32	29.38
	3.0	2.2	85.67	29.51	84.30	30.13	82.92	30.75	82.23	31.05	81.54	31.36	79.21	30.23
	5.0	4.1	93.32	31.47	91.84	32.15	90.36	32.83	89.61	33.14	88.85	33.45	85.49	30.93
	7.0	6.0	105.22	34.78	104.09	35.71	102.26	36.39	101.35	36.75	99.91	35.70	95.07	32.58
	9.0	7.9	108.59	35.18	107.48	36.16	105.59	36.86	104.20	36.00	102.32	34.63	95.07	30.81
	11.0	9.8	112.84	35.85	110.88	36.59	108.55	36.24	106.57	34.88	102.32	32.78	95.07	29.08
	13.0	11.8	116.33	36.24	114.32	37.00	110.89	34.98	109.29	33.72	102.32	30.86	95.07	27.33
	15.0	13.7	119.80	36.67	117.40	36.51	114.13	34.06	109.29	31.87	102.32	29.15	95.07	25.74
	18.0	16.6	125.02	37.26	121.36	34.67	114.13	31.18	109.29	29.15	102.32	26.62	95.07	23.52
21.0	19.5	128.79	35.24	123.51	32.32	114.13	28.48	109.29	26.60	102.32	24.23	95.07	21.55	
24.0	22.4	128.79	32.26	123.51	29.52	114.13	25.92	109.29	24.14	102.32	22.14	95.07	19.65	
27.0	25.3	133.05	30.44	123.51	26.84	114.13	23.56	109.29	22.04	104.60	20.63	95.07	17.77	
30.0	28.1	133.05	27.80	123.51	24.41	114.19	21.43	109.29	20.12	104.60	18.80	95.07	16.06	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

# MDV8 ECO VRF 50Hz



Table 2-8.25: 30HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
110%	-30.0	-30.5	60.43	24.25	59.27	24.89	58.11	25.65	57.53	25.94	56.94	26.30	55.78	26.94
	-25.0	-25.4	60.43	24.38	59.27	24.96	58.11	25.59	57.53	25.86	56.94	26.17	55.78	26.74
	-19.8	-20.0	60.43	24.51	59.27	25.03	58.11	25.53	58.02	26.00	57.51	26.30	56.49	26.88
	-18.8	-19.0	60.43	24.48	59.75	25.19	58.73	25.75	58.21	26.02	57.70	26.32	57.57	27.31
	-16.7	-17.0	61.19	24.75	60.15	25.27	60.11	26.25	59.65	26.55	59.18	26.85	58.26	27.47
	-13.7	-15.0	62.74	25.40	61.78	25.99	60.83	26.57	60.35	26.88	59.87	27.17	58.91	27.79
	-11.8	-13.0	63.47	25.52	62.50	26.08	61.51	26.65	61.02	26.95	60.52	27.23	59.53	27.80
	-9.8	-11.0	64.17	25.61	63.16	26.15	62.15	26.71	61.64	26.98	61.13	27.25	60.11	27.84
	-9.5	-10.0	64.50	25.50	63.48	26.04	62.46	26.59	61.94	26.86	61.43	27.14	60.40	27.69
	-8.5	-9.1	64.80	25.53	63.76	26.07	62.72	26.61	62.20	26.89	61.68	27.16	60.64	27.71
	-7.0	-7.6	65.26	25.55	64.21	26.07	63.15	26.62	62.62	26.88	62.09	27.15	61.03	27.69
	-5.0	-5.6	64.72	25.11	63.66	25.62	62.60	26.14	62.06	26.39	61.53	26.66	60.46	27.18
	-3.0	-3.7	67.07	25.49	65.97	25.99	64.86	26.51	64.31	26.79	63.75	27.02	62.47	27.17
	0.0	-0.7	72.78	26.76	71.59	27.30	70.39	27.86	69.79	28.13	69.19	28.40	67.01	26.88
	3.0	2.2	81.79	29.16	80.46	29.76	79.13	30.36	78.45	30.63	77.11	29.58	74.31	27.49
	5.0	4.1	89.15	31.18	87.73	31.83	86.30	32.47	84.86	31.45	83.34	30.31	80.15	28.04
	7.0	6.0	100.72	34.54	100.48	35.76	96.79	34.63	95.40	33.54	93.66	32.29	87.11	28.80
	9.0	7.9	104.00	35.01	103.80	36.27	99.46	33.71	97.64	32.47	93.66	30.50	87.11	27.18
	11.0	9.8	107.29	35.46	105.02	34.97	101.69	32.62	100.18	31.49	95.84	29.51	87.11	25.63
	13.0	11.8	112.28	36.44	107.73	33.86	101.69	30.74	100.18	29.64	95.84	27.75	87.11	24.06
	15.0	13.7	113.46	35.03	109.96	32.68	104.56	29.84	100.18	27.94	95.84	26.14	87.11	22.77
18.0	16.6	116.89	33.14	109.96	29.91	104.56	27.27	100.18	25.50	95.84	23.80	87.11	20.88	
21.0	19.5	121.66	31.58	109.96	27.34	104.56	24.79	100.18	23.24	95.84	21.84	87.11	19.06	
24.0	22.4	121.66	28.80	109.96	24.84	104.56	22.62	100.18	21.24	95.84	19.90	87.11	17.26	
27.0	25.3	121.66	26.20	109.96	22.59	104.56	20.59	100.18	19.29	95.84	18.03	87.11	15.49	
30.0	28.1	121.66	23.83	113.28	21.17	104.56	18.74	100.18	17.51	95.84	16.33	87.11	13.90	
100%	-30.0	-30.5	60.07	24.77	58.92	25.44	57.76	26.16	57.18	26.52	56.60	26.87	55.45	27.58
	-25.0	-25.4	60.07	24.91	58.92	25.51	57.76	26.13	57.18	26.44	56.60	26.74	55.45	27.35
	-19.8	-20.0	60.07	25.06	58.92	25.59	57.76	26.10	57.68	26.60	57.18	26.88	56.17	27.47
	-18.8	-19.0	60.07	25.05	59.40	25.76	58.38	26.32	57.88	26.63	57.36	26.91	57.25	27.93
	-16.7	-17.0	60.83	25.31	59.80	25.85	59.77	26.84	59.31	27.16	58.85	27.48	57.94	28.12
	-13.7	-15.0	62.37	26.02	61.43	26.60	60.48	27.19	60.01	27.53	59.54	27.83	58.59	28.45
	-11.8	-13.0	63.10	26.13	62.14	26.71	61.16	27.30	60.67	27.58	60.18	27.87	59.20	28.50
	-9.8	-11.0	63.80	26.22	62.80	26.79	61.80	27.37	61.29	27.66	60.79	27.95	59.78	28.53
	-9.5	-10.0	64.13	26.15	63.12	26.69	62.10	27.25	61.59	27.55	61.08	27.83	60.06	28.40
	-8.5	-9.1	64.42	26.19	63.39	26.75	62.37	27.30	61.85	27.58	61.34	27.86	60.30	28.43
	-7.0	-7.6	64.87	26.24	63.82	26.78	62.78	27.33	62.25	27.60	61.73	27.87	60.43	27.92
	-5.0	-5.6	64.32	25.85	63.27	26.38	62.21	26.89	61.68	27.16	61.15	27.42	59.40	26.42
	-3.0	-3.7	66.64	26.25	65.55	26.77	64.45	27.31	63.90	27.59	63.21	27.53	61.06	25.79
	0.0	-0.7	72.32	27.62	71.14	28.17	69.95	28.73	68.96	28.16	67.81	27.25	65.40	25.41
	3.0	2.2	81.26	30.15	79.94	30.77	77.85	29.80	76.52	28.84	75.15	27.83	72.30	25.82
	5.0	4.1	88.57	32.27	86.97	32.58	84.08	30.51	82.57	29.47	79.89	28.00	77.16	26.04
	7.0	6.0	100.08	35.81	97.75	34.74	95.00	32.65	91.07	30.75	87.18	28.88	77.16	24.52
	9.0	7.9	103.18	35.86	100.00	33.67	95.00	30.86	91.07	29.05	87.18	27.26	79.23	23.78
	11.0	9.8	105.93	34.87	100.00	31.83	95.01	29.17	91.07	27.42	87.18	25.68	79.23	22.55
	13.0	11.8	108.28	33.66	100.00	29.97	95.01	27.41	91.07	25.75	87.18	24.12	79.23	21.31
	15.0	13.7	110.86	32.56	100.00	28.30	95.01	25.81	91.07	24.22	87.18	22.79	79.23	20.12
18.0	16.6	110.86	29.78	102.95	26.60	95.01	23.52	91.07	22.21	87.18	20.91	79.23	18.40	
21.0	19.5	110.86	27.16	102.95	24.17	95.01	21.56	91.07	20.30	87.18	19.09	79.23	16.66	
24.0	22.4	110.86	24.67	102.95	22.07	95.01	19.60	91.07	18.46	87.18	17.29	79.23	15.08	
27.0	25.3	110.86	22.44	102.95	20.04	95.01	17.75	91.07	16.60	87.18	15.53	79.23	16.02	
30.0	28.1	110.86	20.42	102.95	18.19	95.01	16.08	91.07	14.94	87.18	13.94	79.23	17.03	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

*Table 2-8.25:30HP heating capacity(continued)*

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
90%	-30.0	-30.5	54.06	22.99	53.02	23.71	51.98	24.29	51.46	24.58	50.94	24.92	49.90	24.58
	-25.0	-25.4	54.06	23.16	53.02	23.75	51.98	24.27	51.46	24.54	50.94	24.83	49.90	24.82
	-19.8	-20.0	55.82	24.08	55.01	24.67	54.18	25.27	53.77	25.59	53.36	25.92	52.38	26.30
	-18.8	-19.0	56.17	24.20	55.34	24.79	54.50	25.39	54.08	25.70	53.67	25.99	52.79	26.55
	-16.7	-17.0	56.85	24.43	55.99	25.01	55.12	25.59	54.69	25.88	54.26	26.17	53.39	26.77
	-13.7	-15.0	57.49	24.81	56.60	25.36	55.70	25.92	55.26	26.21	54.81	26.49	53.91	27.08
	-11.8	-13.0	58.08	24.92	57.17	25.45	56.25	26.00	55.79	26.26	55.33	26.56	54.39	27.07
	-9.8	-11.0	58.63	25.02	57.69	25.53	56.75	26.08	56.28	26.35	55.81	26.62	54.39	26.16
	-9.5	-10.0	58.89	24.94	57.94	25.45	56.99	25.98	56.52	26.25	56.04	26.52	54.39	25.57
	-8.5	-9.1	59.12	24.99	58.16	25.52	57.20	26.03	56.72	26.28	56.24	26.56	54.39	25.16
	-7.0	-7.6	59.48	25.05	58.51	25.55	57.54	26.05	57.05	26.33	56.29	25.97	54.39	24.46
	-5.0	-5.6	58.90	24.66	57.92	25.14	56.94	25.64	56.19	25.27	55.31	24.56	53.46	23.08
	-3.0	-3.7	61.02	25.07	60.00	25.57	58.73	25.46	57.82	24.72	56.90	24.01	54.96	22.50
	0.0	-0.7	66.25	26.46	65.02	26.68	63.07	25.19	62.06	24.41	61.02	23.65	58.86	22.08
	3.0	2.2	74.54	29.00	72.36	27.42	70.05	25.78	68.87	24.95	67.63	24.09	65.06	22.36
	5.0	4.1	80.77	29.86	78.28	28.10	75.66	26.32	74.32	25.44	71.91	24.20	69.44	22.58
	7.0	6.0	91.80	32.12	87.98	29.90	85.50	28.08	81.97	26.48	78.44	24.88	69.44	21.45
	9.0	7.9	92.87	30.78	90.00	28.90	85.57	26.55	81.97	24.95	78.44	23.50	69.44	20.32
	11.0	9.8	95.34	29.85	90.00	27.27	85.57	25.01	81.97	23.52	78.44	22.25	69.44	19.23
	13.0	11.8	97.46	28.71	90.00	25.61	85.57	23.52	81.97	22.25	78.44	21.00	69.44	18.14
15.0	13.7	100.30	27.84	90.00	24.13	85.57	22.25	81.97	21.06	78.44	19.85	69.44	17.05	
18.0	16.6	100.34	25.59	90.00	22.05	85.57	20.36	81.97	19.21	78.44	18.14	72.64	16.80	
21.0	19.5	100.34	23.15	90.00	20.18	85.57	18.57	81.97	17.48	78.44	16.42	72.64	17.01	
24.0	22.4	100.34	21.10	92.71	18.90	85.57	16.78	81.97	15.76	78.44	17.29	72.64	15.55	
27.0	25.3	100.34	19.17	92.71	17.00	85.57	15.02	81.97	16.75	78.44	15.78	72.64	14.16	
30.0	28.1	100.34	17.42	92.71	15.29	85.57	13.45	81.97	17.79	78.44	14.40	72.64	12.90	
80%	-30.0	-30.5	48.06	21.24	47.13	21.88	46.21	22.36	45.75	22.70	45.28	22.35	44.36	22.22
	-25.0	-25.4	48.72	21.67	48.68	22.63	47.98	23.25	47.64	23.60	46.83	23.32	44.76	22.53
	-19.8	-20.0	51.01	22.85	50.24	23.40	49.46	23.99	49.08	24.29	48.62	24.43	47.14	23.85
	-18.8	-19.0	51.29	22.97	50.51	23.52	49.72	24.06	49.33	24.36	48.93	24.64	47.48	24.08
	-16.7	-17.0	51.81	23.18	51.00	23.71	50.20	24.26	49.79	24.54	49.39	24.81	48.15	24.53
	-13.7	-15.0	52.30	23.53	51.47	24.06	50.64	24.58	50.23	24.85	49.81	25.13	48.35	24.32
	-11.8	-13.0	52.77	23.65	51.92	24.15	51.06	24.68	50.64	24.93	50.03	24.78	48.34	23.46
	-9.8	-11.0	53.20	23.76	52.33	24.26	51.46	24.75	50.85	24.56	50.04	23.95	48.34	22.63
	-9.5	-10.0	53.41	23.67	52.53	24.18	51.64	24.65	50.85	24.03	50.04	23.39	48.35	22.10
	-8.5	-9.1	53.59	23.74	52.70	24.21	51.64	24.26	50.84	23.64	50.04	23.03	48.35	21.72
	-7.0	-7.6	53.88	23.80	52.98	24.28	51.64	23.59	50.85	22.98	50.04	22.36	48.34	21.04
	-5.0	-5.6	53.27	23.45	52.22	23.48	50.72	22.29	49.95	21.71	49.16	21.08	47.52	19.83
	-3.0	-3.7	55.18	23.87	53.76	22.97	52.21	21.80	51.40	21.17	50.58	20.56	48.85	19.28
	0.0	-0.7	59.46	23.97	57.80	22.76	56.06	21.49	55.17	20.85	54.25	20.20	52.32	18.93
	3.0	2.2	66.28	24.65	64.32	23.30	62.28	21.92	61.21	21.17	60.13	20.50	57.85	19.36
	5.0	4.1	71.79	25.25	69.58	23.81	67.27	22.34	66.06	21.56	63.91	20.67	61.72	19.62
	7.0	6.0	81.62	27.17	78.20	25.26	76.00	23.78	74.26	22.99	71.04	21.83	61.72	18.55
	9.0	7.9	82.54	25.91	80.00	24.33	76.00	22.53	74.26	21.79	71.04	20.67	63.65	18.04
	11.0	9.8	84.75	25.10	82.39	23.65	76.00	21.35	74.26	20.66	71.04	19.54	63.65	16.96
	13.0	11.8	86.63	24.07	82.39	22.33	76.00	20.12	74.26	19.45	71.04	18.40	63.65	16.07
15.0	13.7	89.16	23.35	82.39	21.10	76.00	19.00	74.26	18.36	71.04	17.32	63.65	16.87	
18.0	16.6	89.33	21.61	82.39	19.30	77.49	18.37	74.26	17.29	71.04	16.30	63.65	15.61	
21.0	19.5	89.33	19.56	82.39	17.52	77.49	15.99	74.26	17.47	71.04	16.52	63.65	14.44	
24.0	22.4	89.33	17.74	82.39	15.79	77.49	16.87	74.26	15.96	71.04	15.07	63.65	13.14	
27.0	25.3	89.33	15.95	82.39	16.76	77.49	15.40	74.26	14.55	71.04	13.74	63.65	11.62	
30.0	28.1	89.33	14.33	82.39	17.78	77.49	14.05	74.26	13.26	71.04	12.52	63.65	10.27	

Abbreviations:  
CR: Combination ratio  
TC: Total capacity (kW)  
PI: Power input (compressor + outdoor fan motor) (kW)  
Notes:  
Shaded cells indicate rating condition.

*Table continued on next page ...*

# MDV8 ECO VRF 50Hz



Table 2-8.25: 30HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
70%	-30.0	-30.5	42.64	19.68	42.64	20.57	40.92	20.19	40.03	19.87	39.62	19.85	38.81	19.76
	-25.0	-25.4	44.62	20.80	43.97	21.37	42.95	21.43	42.24	21.17	41.58	20.95	40.20	20.50
	-19.8	-20.0	45.85	21.58	45.14	22.10	44.28	22.35	43.66	22.09	43.04	21.82	41.78	21.34
	-18.8	-19.0	46.05	21.69	45.33	22.21	44.52	22.54	43.91	22.26	43.30	22.02	42.07	21.52
	-16.7	-17.0	46.45	21.91	45.71	22.40	44.97	22.90	44.39	22.68	43.79	22.39	42.30	21.28
	-13.7	-15.0	46.83	22.24	46.07	22.72	45.18	22.88	44.49	22.38	43.78	21.84	42.30	20.73
	-11.8	-13.0	47.18	22.34	46.41	22.83	45.19	22.13	44.49	21.60	43.78	21.07	42.31	19.97
	-9.8	-11.0	47.51	22.45	46.53	22.38	45.19	21.37	44.49	20.83	43.78	20.30	42.30	19.19
	-9.5	-10.0	47.67	22.40	46.53	21.85	45.19	20.86	44.50	20.36	43.78	19.80	42.30	18.71
	-8.5	-9.1	47.81	22.46	46.53	21.52	45.19	20.52	44.50	20.00	43.79	19.46	42.30	18.37
	-7.0	-7.6	47.83	21.90	46.53	20.91	45.18	19.91	44.49	19.39	43.78	18.86	42.31	17.76
	-5.0	-5.6	46.96	20.70	45.69	19.73	44.38	18.74	43.72	18.27	43.02	17.73	41.58	16.76
	-3.0	-3.7	48.36	20.23	47.05	19.27	45.69	18.29	44.98	17.76	44.26	17.25	42.75	16.42
	0.0	-0.7	52.03	20.01	50.57	18.97	49.05	17.93	48.27	17.45	47.46	17.03	45.78	16.19
	3.0	2.2	57.99	20.48	56.27	19.35	54.49	18.33	53.56	17.91	52.60	17.44	50.61	16.56
	5.0	4.1	62.82	20.92	60.89	19.75	58.86	18.82	57.80	18.33	55.92	17.59	54.01	16.71
	7.0	6.0	71.41	22.41	68.43	21.08	66.50	20.15	63.78	19.16	61.02	18.19	54.01	15.64
	9.0	7.9	72.23	21.42	70.00	20.45	66.50	19.08	63.78	18.01	61.02	16.90	54.01	14.77
	11.0	9.8	74.15	20.84	72.17	19.95	66.50	18.02	63.78	17.13	61.02	15.98	54.01	15.27
	13.0	11.8	75.80	20.09	72.17	18.78	66.50	16.96	63.78	16.05	61.02	16.90	54.01	14.35
15.0	13.7	78.01	19.53	72.17	17.67	66.50	15.93	63.78	16.97	61.02	15.98	54.01	13.53	
18.0	16.6	78.98	18.37	73.45	17.03	66.50	16.61	63.78	15.61	61.02	14.56	54.01	12.34	
21.0	19.5	78.98	16.31	73.45	17.12	66.50	15.23	63.78	14.40	61.02	13.46	54.01	11.43	
24.0	22.4	78.98	17.18	73.45	15.66	66.50	13.85	63.78	13.13	61.02	12.48	54.01	10.43	
27.0	25.3	78.98	15.66	73.45	14.26	66.50	12.52	63.78	11.61	61.02	10.97	54.01	9.28	
30.0	28.1	78.98	14.27	73.45	12.99	67.02	11.40	63.78	10.26	61.02	9.65	56.31	8.60	
60%	-30.0	-30.5	38.46	18.82	37.34	18.50	36.13	18.12	35.38	17.75	34.35	17.41	33.27	17.16
	-25.0	-25.4	39.47	19.57	38.45	19.30	37.34	18.90	36.72	18.62	36.15	18.44	34.99	18.03
	-19.8	-20.0	40.36	20.27	39.41	20.03	38.39	19.61	37.87	19.39	37.35	19.18	36.26	18.67
	-18.8	-19.0	40.51	20.38	39.59	20.18	38.58	19.75	38.07	19.55	37.53	19.27	36.26	18.39
	-16.7	-17.0	40.80	20.59	39.88	20.34	38.73	19.53	38.13	19.10	37.52	18.68	36.26	17.77
	-13.7	-15.0	40.99	20.65	39.88	19.85	38.73	19.02	38.14	18.61	37.53	18.16	36.26	17.23
	-11.8	-13.0	41.00	19.99	39.88	19.15	38.73	18.32	38.14	17.90	37.53	17.46	36.26	16.55
	-9.8	-11.0	40.99	19.27	39.89	18.48	38.74	17.66	38.13	17.20	37.53	16.77	36.26	15.98
	-9.5	-10.0	40.99	18.82	39.88	18.02	38.73	17.18	38.14	16.77	37.53	16.33	36.27	15.63
	-8.5	-9.1	40.99	18.51	39.88	17.71	38.74	16.89	38.14	16.47	37.52	16.03	36.26	15.36
	-7.0	-7.6	40.99	17.96	39.88	17.17	38.74	16.37	38.14	15.92	37.53	15.59	36.26	14.93
	-5.0	-5.6	40.25	16.91	39.17	16.16	38.05	15.36	37.46	15.05	36.88	14.76	35.65	14.10
	-3.0	-3.7	41.46	16.50	40.33	15.71	39.16	15.06	38.55	14.72	37.93	14.40	36.64	13.78
	0.0	-0.7	44.60	16.21	43.34	15.54	42.04	14.88	41.38	14.58	40.69	14.26	39.25	13.59
	3.0	2.2	49.70	16.64	48.25	15.98	46.71	15.27	45.92	14.92	45.09	14.56	43.38	15.43
	5.0	4.1	53.86	17.12	52.19	16.37	50.46	15.65	49.56	15.26	47.94	14.66	46.29	15.60
	7.0	6.0	61.22	18.43	58.65	17.43	57.00	16.72	54.82	15.80	52.45	16.38	46.29	13.98
	9.0	7.9	61.91	17.64	60.00	16.60	57.00	15.44	54.82	14.63	52.45	15.41	46.29	13.20
	11.0	9.8	63.56	17.10	61.84	16.24	57.00	16.25	54.82	15.39	52.45	14.51	46.29	12.37
	13.0	11.8	64.97	16.42	61.84	15.28	57.00	15.29	54.82	14.45	52.45	13.61	46.29	11.55
15.0	13.7	66.59	15.84	61.84	16.15	57.00	14.36	54.82	13.65	52.45	12.77	46.29	10.88	
18.0	16.6	66.59	16.51	61.84	14.81	57.00	13.28	54.82	12.37	52.45	11.70	46.29	9.94	
21.0	19.5	66.59	15.10	61.84	13.59	57.00	12.09	54.82	11.53	52.45	10.66	46.29	9.01	
24.0	22.4	66.59	13.77	61.84	12.57	57.00	11.00	54.82	10.47	52.45	9.94	46.29	8.12	
27.0	25.3	66.59	12.33	61.84	11.06	57.00	9.72	54.82	9.10	52.45	8.52	46.29	7.12	
30.0	28.1	66.59	11.05	61.84	9.73	57.00	8.59	54.82	7.91	52.45	7.30	47.57	6.42	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

Table2-8.25:30HP heating capacity(continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
50%	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
	-30.0	-30.5	32.49	16.23	31.51	15.88	30.67	15.79	30.28	15.78	29.91	15.83	29.15	15.96
	-25.0	-25.4	33.31	16.85	32.42	16.53	31.53	16.19	31.08	16.02	30.63	15.86	29.71	15.56
	-19.8	-20.0	34.03	17.44	33.21	17.12	32.28	16.53	31.78	16.21	31.28	15.84	30.23	15.15
	-18.8	-19.0	34.16	17.57	33.23	16.94	32.28	16.29	31.78	15.94	31.27	15.59	30.23	14.95
	-16.7	-17.0	34.16	17.03	33.24	16.41	32.28	15.75	31.78	15.40	31.28	15.06	30.22	14.54
	-13.7	-15.0	34.16	16.59	33.24	15.96	32.28	15.28	31.78	14.92	31.28	14.67	30.22	14.18
	-11.8	-13.0	34.16	15.99	33.24	15.35	32.27	14.65	31.79	14.44	31.28	14.18	30.23	13.69
	-9.8	-11.0	34.16	15.36	33.24	14.71	32.27	14.15	31.78	13.94	31.28	13.67	30.22	13.16
	-9.5	-10.0	34.17	14.97	33.24	14.33	32.28	13.84	31.79	13.60	31.28	13.37	30.22	12.83
	-8.5	-9.1	34.16	14.69	33.24	14.10	32.28	13.62	31.79	13.39	31.28	13.13	30.22	12.62
	-7.0	-7.6	34.16	14.21	33.23	13.70	32.28	13.23	31.79	13.00	31.28	12.74	30.23	12.24
	-5.0	-5.6	33.55	13.41	32.64	12.93	31.71	12.49	31.23	12.26	30.74	12.02	29.70	12.78
	-3.0	-3.7	34.55	13.12	33.60	12.65	32.63	12.20	32.13	11.98	31.61	11.72	30.54	12.48
	0.0	-0.7	37.17	13.01	36.13	12.55	35.05	12.06	34.48	13.16	33.90	12.88	32.70	12.27
	3.0	2.2	41.43	13.38	40.20	12.86	38.92	13.77	38.26	13.47	37.58	13.14	36.14	12.46
	5.0	4.1	44.88	13.72	43.49	14.75	42.03	14.08	41.28	13.74	39.95	13.20	38.58	12.12
	7.0	6.0	51.03	14.58	48.87	15.11	47.50	14.28	45.82	13.63	43.69	12.76	38.58	10.89
	9.0	7.9	51.61	13.82	50.00	14.52	47.50	13.45	45.82	12.80	43.69	12.04	38.58	10.39
	11.0	9.8	52.97	14.79	51.51	14.06	47.50	12.62	45.82	11.98	43.69	11.27	38.58	9.73
13.0	11.8	54.14	14.24	51.51	13.14	47.50	11.77	45.82	11.23	43.69	10.58	38.58	9.10	
15.0	13.7	54.14	13.38	51.51	12.36	47.50	11.07	45.82	10.56	43.69	9.96	39.65	8.81	
18.0	16.6	55.63	12.75	51.51	11.24	47.50	10.11	45.82	9.60	43.69	9.02	39.65	7.92	
21.0	19.5	55.63	11.60	51.51	10.33	47.50	9.16	45.82	8.71	43.69	8.11	39.65	7.04	
24.0	22.4	55.63	10.53	51.51	9.33	47.50	8.25	45.82	7.76	43.69	7.21	39.65	6.43	
27.0	25.3	55.63	9.25	51.51	8.20	47.50	7.25	45.82	6.79	43.69	6.44	39.65	5.76	
30.0	28.1	55.63	8.12	51.51	7.21	47.72	6.40	45.82	5.94	43.69	5.76	39.65	5.15	

**Abbreviations:**

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

**Notes:**

Shaded cells indicate rating condition.

# MDV8 ECO VRF 50Hz



Table 2-8.26: 32HP heating capacity

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
		°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
130%	-30.0	-30.5	70.44	26.89	69.09	27.67	67.73	28.49	67.05	28.81	66.38	29.18	65.02	29.97
	-25.0	-25.4	70.44	27.08	69.09	27.77	67.73	28.47	67.05	28.78	66.38	29.10	65.02	29.77
	-19.8	-20.0	70.44	27.27	69.09	27.87	67.73	28.45	67.05	28.74	66.38	29.01	65.02	29.56
	-18.8	-19.0	70.44	27.25	69.09	27.84	67.73	28.39	67.05	28.66	66.38	28.93	65.02	29.48
	-16.7	-17.0	70.44	27.18	69.09	27.72	67.73	28.27	67.05	28.52	66.38	28.80	65.02	29.28
	-13.7	-15.0	70.44	27.23	69.09	27.76	68.29	28.51	67.69	28.80	67.09	29.10	65.89	29.67
	-11.8	-13.0	71.16	27.30	69.95	27.87	68.73	28.44	69.19	29.16	68.64	29.48	67.55	30.12
	-9.8	-11.0	72.78	27.68	71.67	28.30	70.55	28.91	70.00	29.23	69.43	29.56	68.31	30.17
	-9.5	-10.0	73.20	27.55	72.08	28.18	70.95	28.80	70.38	29.11	69.81	29.42	68.67	30.01
	-8.5	-9.1	73.58	27.62	72.44	28.22	71.29	28.83	70.72	29.13	70.14	29.43	68.99	30.05
	-7.0	-7.6	74.18	27.61	73.02	28.22	71.85	28.81	71.26	29.12	70.68	29.42	69.50	30.02
	-5.0	-5.6	73.70	27.16	72.53	27.72	71.34	28.31	70.75	28.61	70.15	28.87	68.96	29.47
	-3.0	-3.7	76.40	27.48	75.17	28.07	73.94	28.65	73.33	28.95	72.70	29.24	71.46	29.82
	0.0	-0.7	82.88	28.73	81.56	29.37	80.22	29.97	79.55	30.27	78.88	30.57	77.54	31.17
	3.0	2.2	92.97	31.09	91.50	31.77	90.03	32.44	89.29	32.79	88.55	33.12	87.06	33.81
	5.0	4.1	101.17	33.05	99.60	33.82	98.02	34.54	97.22	34.91	96.43	35.27	94.83	35.99
	7.0	6.0	115.86	37.03	113.63	37.76	111.40	38.43	110.29	38.75	109.17	39.07	106.94	38.66
	9.0	7.9	119.56	37.43	117.26	38.13	114.96	38.84	113.82	39.17	112.67	39.51	106.94	36.66
	11.0	9.8	123.27	37.80	120.90	38.50	118.53	39.21	117.34	39.56	116.16	39.48	108.43	35.22
	13.0	11.8	126.98	38.10	124.54	38.84	122.09	39.56	120.87	39.72	116.16	37.28	108.43	33.14
	15.0	13.7	130.69	38.42	128.17	39.20	125.66	39.94	124.40	38.71	116.16	35.28	108.43	31.29
	18.0	16.6	136.25	38.92	133.63	39.71	130.06	38.13	124.62	35.63	116.16	32.31	108.43	28.57
	21.0	19.5	141.81	39.39	139.08	39.25	130.06	34.93	124.62	32.60	116.16	29.53	108.43	26.03
24.0	22.4	147.37	39.90	140.88	36.46	130.06	31.90	124.62	29.72	119.20	27.61	108.43	23.75	
27.0	25.3	147.37	36.69	140.88	33.25	130.06	29.06	124.62	26.99	119.20	25.05	108.43	21.61	
30.0	28.1	152.01	34.79	140.88	30.32	130.06	26.48	124.62	24.52	119.20	22.72	108.43	19.67	
120%	-30.0	-30.5	67.34	26.31	66.05	27.08	64.75	27.83	64.10	28.18	63.46	28.63	62.16	29.33
	-25.0	-25.4	67.34	26.50	66.05	27.17	64.75	27.84	64.10	28.14	63.46	28.50	62.16	29.12
	-19.8	-20.0	67.34	26.69	66.05	27.26	64.75	27.85	64.10	28.10	63.46	28.36	62.16	28.90
	-18.8	-19.0	67.34	26.69	66.05	27.22	64.75	27.78	64.10	28.03	63.46	28.31	62.16	28.83
	-16.7	-17.0	67.34	26.58	66.05	27.12	64.75	27.66	64.63	28.13	64.06	28.42	62.92	29.02
	-13.7	-15.0	67.94	26.88	66.78	27.45	65.63	28.03	65.05	28.33	65.48	29.05	64.46	29.71
	-11.8	-13.0	69.42	27.25	68.37	27.87	67.31	28.51	66.79	28.81	66.25	29.14	65.20	29.78
	-9.8	-11.0	70.24	27.36	69.16	27.96	68.08	28.55	67.53	28.87	66.99	29.18	65.89	29.79
	-9.5	-10.0	70.64	27.25	69.55	27.85	68.44	28.45	67.89	28.77	67.34	29.05	66.23	29.65
	-8.5	-9.1	70.99	27.29	69.88	27.88	68.76	28.49	68.20	28.77	67.64	29.07	66.52	29.67
	-7.0	-7.6	71.54	27.32	70.41	27.89	69.28	28.47	68.70	28.78	68.13	29.05	66.99	29.65
	-5.0	-5.6	71.04	26.84	69.89	27.41	68.74	27.97	68.17	28.25	67.59	28.54	66.43	29.10
	-3.0	-3.7	73.63	27.19	72.44	27.76	71.25	28.34	70.65	28.62	70.04	28.89	68.84	29.45
	0.0	-0.7	79.90	28.46	78.62	29.05	77.32	29.64	76.67	29.96	76.02	30.26	74.71	30.83
	3.0	2.2	89.68	30.89	88.25	31.54	86.82	32.21	86.10	32.54	85.38	32.86	83.38	32.49
	5.0	4.1	97.63	32.92	96.10	33.64	94.56	34.35	93.79	34.71	93.02	35.06	89.99	33.26
	7.0	6.0	110.76	36.57	108.63	37.25	106.50	37.91	106.32	38.53	105.17	38.37	100.22	35.10
	9.0	7.9	114.30	36.97	112.11	37.66	110.77	38.63	109.70	38.78	107.71	37.26	100.22	33.17
	11.0	9.8	117.85	37.38	115.58	38.08	114.27	39.07	112.18	37.55	110.06	36.05	100.22	31.34
	13.0	11.8	121.39	37.72	119.06	38.45	116.72	37.69	112.18	35.47	110.06	34.00	100.22	29.50
	15.0	13.7	124.94	38.09	123.49	39.14	116.72	35.66	112.18	33.51	110.06	32.10	100.22	27.79
	18.0	16.6	130.25	38.65	127.75	37.47	120.06	33.63	112.18	30.66	110.06	29.34	100.22	25.30
	21.0	19.5	135.57	38.12	127.75	34.33	120.06	30.73	112.18	27.97	110.06	26.71	100.22	23.18
24.0	22.4	140.06	36.11	127.75	31.37	120.06	27.99	112.18	25.42	110.06	24.28	100.22	21.13	
27.0	25.3	140.06	32.92	130.10	29.11	120.06	25.37	112.18	23.12	110.06	22.15	100.22	19.15	
30.0	28.1	140.06	30.01	130.10	26.52	120.06	23.01	115.08	21.57	110.06	20.20	100.22	17.35	

**Abbreviations:**

- CR: Combination ratio
- TC: Total capacity (kW)
- PI: Power input (compressor + outdoor fan motor) (kW)

Notes:  
Shaded cells indicate rating condition.

Table continued on next page ...



**Table 2-8.26: 32HP heating capacity (continued)**

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
	°C DB	°C WB	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
110%	-30.0	-30.5	63.61	25.54	62.39	26.23	61.16	26.97	60.55	27.35	59.94	27.68	58.72	28.37
	-25.0	-25.4	63.61	25.70	62.39	26.32	61.16	26.96	60.55	27.29	59.94	27.58	58.72	28.18
	-19.8	-20.0	63.61	25.86	62.39	26.42	61.16	26.95	60.55	27.22	59.94	27.49	59.27	28.27
	-18.8	-19.0	63.61	25.84	62.39	26.37	61.16	26.91	61.07	27.37	60.54	27.68	59.47	28.27
	-16.7	-17.0	64.19	26.00	63.11	26.57	62.02	27.16	62.39	27.84	61.91	28.18	60.96	28.79
	-13.7	-15.0	65.62	26.65	64.63	27.27	63.64	27.89	63.15	28.21	62.65	28.52	61.66	29.15
	-11.8	-13.0	66.41	26.77	65.39	27.37	64.37	27.99	63.86	28.27	63.35	28.59	62.32	29.19
	-9.8	-11.0	67.16	26.86	66.11	27.43	65.06	28.02	64.54	28.31	64.01	28.62	62.95	29.21
	-9.5	-10.0	67.52	26.74	66.46	27.32	65.39	27.91	64.86	28.19	64.32	28.48	63.25	29.06
	-8.5	-9.1	67.83	26.80	66.76	27.38	65.68	27.93	65.14	28.22	64.60	28.51	63.51	29.09
	-7.0	-7.6	68.33	26.80	67.24	27.37	66.14	27.93	65.59	28.22	65.04	28.52	63.93	29.08
	-5.0	-5.6	67.79	26.36	66.69	26.89	65.58	27.45	65.03	27.70	64.47	27.98	63.35	28.52
	-3.0	-3.7	70.26	26.71	69.11	27.27	67.96	27.81	67.38	28.09	66.81	28.35	65.65	28.90
	0.0	-0.7	76.25	28.03	75.00	28.61	73.76	29.16	73.13	29.46	72.50	29.75	70.54	28.85
	3.0	2.2	85.63	30.50	84.26	31.15	82.87	31.78	82.18	32.11	81.18	31.79	78.23	29.52
	5.0	4.1	93.31	32.57	91.83	33.26	90.34	33.94	89.33	33.80	87.74	32.61	84.37	30.16
	7.0	6.0	105.66	36.16	103.84	36.88	101.88	37.21	100.42	36.05	98.59	34.69	91.74	31.00
	9.0	7.9	109.10	36.62	107.22	37.38	104.70	36.28	102.78	34.93	98.59	32.83	91.74	29.28
	11.0	9.8	112.55	37.08	110.55	37.66	107.04	35.10	102.78	33.03	98.59	31.05	91.74	27.58
	13.0	11.8	116.04	37.54	113.41	36.49	107.04	33.10	102.78	31.13	98.59	29.18	91.74	25.90
	15.0	13.7	119.44	37.79	115.75	35.24	107.04	31.27	102.78	29.35	98.59	27.48	91.74	24.40
18.0	16.6	123.04	35.78	115.75	32.29	107.04	28.54	102.78	26.79	98.59	25.05	91.74	22.42	
21.0	19.5	128.06	34.08	115.75	29.50	107.04	26.02	102.78	24.33	98.59	22.90	91.74	20.46	
24.0	22.4	128.36	31.21	115.75	26.84	110.11	24.32	105.51	22.83	98.59	20.86	91.74	18.55	
27.0	25.3	128.36	28.37	115.75	24.37	110.11	22.16	105.51	20.73	98.59	18.95	91.74	16.65	
30.0	28.1	128.36	25.80	119.30	22.80	110.11	20.18	105.51	18.83	101.13	17.66	91.74	14.94	
100%	-30.0	-30.5	63.23	26.08	62.02	26.87	60.80	27.61	60.19	27.99	59.58	28.32	58.37	29.03
	-25.0	-25.4	63.23	26.26	62.02	26.92	60.80	27.57	60.19	27.89	59.58	28.20	58.37	28.82
	-19.8	-20.0	63.23	26.45	62.02	26.97	60.80	27.54	60.19	27.79	59.58	28.08	58.93	28.89
	-18.8	-19.0	63.23	26.44	62.02	26.96	60.80	27.48	60.71	27.99	60.18	28.29	59.12	28.91
	-16.7	-17.0	63.81	26.61	62.73	27.19	61.65	27.76	62.03	28.48	61.55	28.78	60.61	29.48
	-13.7	-15.0	65.23	27.27	64.25	27.90	63.27	28.50	62.78	28.84	62.29	29.18	61.31	29.81
	-11.8	-13.0	66.02	27.40	65.01	28.02	64.00	28.63	63.49	28.94	62.98	29.25	61.97	29.89
	-9.8	-11.0	66.76	27.53	65.73	28.11	64.69	28.71	64.16	28.99	63.64	29.31	62.59	29.92
	-9.5	-10.0	67.12	27.42	66.07	28.00	65.01	28.59	64.48	28.88	63.95	29.20	62.89	29.80
	-8.5	-9.1	67.43	27.43	66.37	28.04	65.30	28.62	64.76	28.93	64.23	29.21	63.15	29.82
	-7.0	-7.6	67.93	27.49	66.85	28.07	65.76	28.66	65.21	28.95	64.66	29.24	63.57	29.82
	-5.0	-5.6	67.38	27.09	66.29	27.63	65.19	28.17	64.64	28.46	64.09	28.73	62.53	28.31
	-3.0	-3.7	69.82	27.50	68.68	28.07	67.54	28.61	66.97	28.89	66.39	29.17	64.29	27.68
	0.0	-0.7	75.76	28.90	74.52	29.49	73.29	30.07	72.58	30.19	71.38	29.25	68.84	27.25
	3.0	2.2	85.08	31.52	83.71	32.16	81.95	32.02	80.55	30.96	79.11	29.86	76.11	27.72
	5.0	4.1	92.69	33.69	91.22	34.39	88.50	32.80	86.93	31.67	84.10	30.09	81.22	27.97
	7.0	6.0	104.99	37.44	102.90	37.37	100.00	35.09	95.96	33.06	91.77	31.04	81.22	26.38
	9.0	7.9	108.41	37.99	105.26	36.19	100.08	33.24	95.96	31.28	91.77	29.30	81.22	24.83
	11.0	9.8	111.51	37.58	105.26	34.27	100.08	31.39	95.96	29.49	91.77	27.63	81.22	23.49
	13.0	11.8	113.98	36.23	105.26	32.28	100.08	29.50	95.96	27.70	91.77	25.92	81.22	22.18
	15.0	13.7	113.98	34.27	108.39	31.38	100.08	27.82	95.96	26.10	91.77	24.41	83.44	21.55
18.0	16.6	113.98	31.35	108.39	28.67	100.08	25.32	95.96	23.82	91.77	22.42	83.44	19.67	
21.0	19.5	113.98	28.61	108.39	26.05	100.08	23.15	95.96	21.79	91.77	20.47	83.44	17.88	
24.0	22.4	113.98	26.01	108.39	23.70	100.08	21.11	95.96	19.85	91.77	18.55	83.44	16.10	
27.0	25.3	113.98	23.59	108.39	21.59	100.08	19.07	95.96	17.87	91.77	16.69	83.44	17.12	
30.0	28.1	116.79	21.92	108.39	19.67	100.08	17.24	95.96	16.08	91.77	15.01	83.44	18.21	

**Abbreviations:**

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

**Notes:**

Shaded cells indicate rating condition.

Table continued on next page ...

# MDV8 ECO VRF 50Hz



Table 2-8.26: 32HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
90%	°C DB	°C WB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
	-30.0	-30.5	56.91	24.25	55.81	24.97	54.72	25.63	54.17	25.93	53.63	26.25	52.53	25.99
	-25.0	-25.4	56.91	24.41	55.81	25.01	54.72	25.59	54.17	25.88	53.63	26.17	52.53	26.23
	-19.8	-20.0	57.64	24.89	57.52	25.82	56.67	26.47	56.24	26.80	55.82	27.14	54.86	27.64
	-18.8	-19.0	58.75	25.34	57.88	25.96	57.01	26.60	56.58	26.91	56.15	27.23	55.28	27.89
	-16.7	-17.0	59.47	25.61	58.58	26.21	57.68	26.82	57.23	27.11	56.78	27.43	55.88	28.05
	-13.7	-15.0	60.16	25.99	59.24	26.57	58.31	27.15	57.84	27.47	57.38	27.78	56.45	28.38
	-11.8	-13.0	60.81	26.11	59.86	26.66	58.90	27.24	58.42	27.53	57.95	27.84	56.99	28.41
	-9.8	-11.0	61.41	26.21	60.43	26.75	59.45	27.31	58.96	27.59	58.47	27.89	57.26	27.99
	-9.5	-10.0	61.69	26.12	60.70	26.67	59.71	27.22	59.21	27.50	58.72	27.79	57.25	27.35
	-8.5	-9.1	61.93	26.17	60.94	26.74	59.94	27.26	59.43	27.55	58.93	27.82	57.26	26.94
	-7.0	-7.6	62.33	26.23	61.31	26.77	60.30	27.30	59.79	27.56	59.26	27.77	57.26	26.18
	-5.0	-5.6	61.73	25.81	60.71	26.35	59.69	26.86	59.16	27.06	58.23	26.31	56.28	24.73
	-3.0	-3.7	63.96	26.25	62.90	26.76	61.82	27.27	60.87	26.50	59.90	25.73	57.86	24.11
	0.0	-0.7	69.43	27.66	68.28	28.20	66.40	27.05	65.33	26.20	64.25	25.38	61.97	23.70
	3.0	2.2	78.09	30.28	76.17	29.43	73.75	27.68	72.49	26.76	71.20	25.85	68.49	23.97
	5.0	4.1	85.03	32.06	82.41	30.20	79.66	28.28	78.23	27.31	75.69	25.96	73.09	24.12
	7.0	6.0	96.65	34.56	92.60	32.12	90.00	30.20	86.44	28.50	82.59	26.73	73.09	22.89
	9.0	7.9	97.75	33.10	94.74	31.08	90.10	28.55	86.44	26.85	82.59	25.15	73.09	21.70
	11.0	9.8	100.36	32.10	94.74	29.33	90.10	26.87	86.44	25.29	82.59	23.81	73.09	20.56
13.0	11.8	102.59	30.93	94.74	27.55	90.10	25.23	86.44	23.82	82.59	22.47	73.09	19.36	
15.0	13.7	105.58	29.99	94.74	25.93	90.10	23.81	86.44	22.57	82.59	21.24	73.09	18.24	
18.0	16.6	105.82	27.67	94.74	23.61	90.10	21.82	86.44	20.63	82.59	19.41	76.50	17.98	
21.0	19.5	105.82	24.90	94.74	21.62	90.10	19.89	86.44	18.80	82.59	17.60	76.50	18.21	
24.0	22.4	105.82	22.69	97.60	20.25	90.10	18.04	86.44	16.95	82.59	15.82	76.50	16.64	
27.0	25.3	105.82	20.65	97.60	18.32	90.10	16.15	86.44	15.21	82.59	16.87	76.50	15.16	
30.0	28.1	105.82	18.78	97.60	16.57	90.10	14.46	86.44	13.66	82.59	18.00	76.50	13.80	
80%	-30.0	-30.5	50.59	22.35	49.61	22.99	48.64	23.60	48.15	23.90	47.67	23.61	46.69	23.44
	-25.0	-25.4	51.10	22.74	50.25	23.36	50.18	24.34	49.81	24.68	48.36	24.18	46.69	23.59
	-19.8	-20.0	53.37	23.92	52.57	24.51	51.77	25.11	51.37	25.42	50.97	25.72	49.40	25.11
	-18.8	-19.0	53.67	24.05	52.86	24.64	52.04	25.21	51.64	25.50	51.23	25.82	49.77	25.36
	-16.7	-17.0	54.25	24.26	53.41	24.84	52.57	25.40	52.15	25.68	51.73	25.99	50.48	25.81
	-13.7	-15.0	54.78	24.63	53.92	25.19	53.06	25.73	52.62	26.00	52.19	26.29	50.89	25.95
	-11.8	-13.0	55.28	24.75	54.40	25.29	53.51	25.82	53.07	26.09	52.62	26.38	50.89	25.10
	-9.8	-11.0	55.75	24.88	54.84	25.38	53.94	25.91	53.48	26.16	52.67	25.59	50.89	24.18
	-9.5	-10.0	55.97	24.79	55.06	25.30	54.14	25.81	53.53	25.67	52.68	25.01	50.90	23.64
	-8.5	-9.1	56.17	24.84	55.25	25.34	54.32	25.86	53.53	25.29	52.68	24.62	50.89	23.22
	-7.0	-7.6	56.48	24.90	55.54	25.39	54.36	25.27	53.53	24.59	52.67	23.92	50.89	22.53
	-5.0	-5.6	55.86	24.51	54.92	24.98	53.40	23.88	52.59	23.25	51.76	22.58	50.02	21.22
	-3.0	-3.7	57.86	24.95	56.60	24.63	54.95	23.33	54.11	22.68	53.25	22.03	51.44	20.66
	0.0	-0.7	62.60	25.74	60.84	24.39	59.02	23.03	58.07	22.33	57.10	21.65	55.08	20.23
	3.0	2.2	69.76	26.44	67.71	25.02	65.56	23.52	64.45	22.75	63.30	21.99	60.88	20.65
	5.0	4.1	75.59	27.14	73.25	25.57	70.80	23.96	69.54	23.12	67.28	22.09	64.97	20.93
	7.0	6.0	85.92	29.15	82.32	27.13	80.00	25.51	76.76	24.14	74.79	23.27	64.97	19.82
	9.0	7.9	86.90	27.86	84.21	26.14	80.00	24.11	76.76	22.89	74.79	22.09	64.97	18.62
	11.0	9.8	89.21	26.96	86.77	25.39	80.00	22.81	76.76	21.68	74.79	20.89	64.97	17.68
	13.0	11.8	91.19	25.87	86.77	23.87	80.00	21.53	76.76	20.42	74.79	19.64	64.97	16.63
15.0	13.7	93.85	25.05	86.77	22.61	80.00	20.33	76.76	19.25	74.79	18.50	64.97	15.68	
18.0	16.6	94.84	23.55	86.77	20.64	80.12	18.58	76.76	17.51	74.79	17.43	64.97	16.17	
21.0	19.5	94.84	21.17	86.77	18.79	80.12	16.78	76.76	15.81	74.79	17.65	64.97	14.93	
24.0	22.4	94.84	19.17	86.77	16.95	80.12	17.71	76.76	16.78	74.79	16.11	64.97	13.61	
27.0	25.3	94.84	17.22	86.77	15.15	80.12	16.16	76.76	15.26	74.79	14.68	64.97	12.08	
30.0	28.1	94.84	15.46	86.77	13.54	80.12	14.74	76.76	13.89	74.79	13.37	66.82	11.02	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

Table continued on next page ...

Table 2-8.26: 32HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
°C DB / °C WB		kW		kW		kW		kW		kW		kW		
70%	-30.0	-30.5	44.71	20.64	43.98	21.25	43.01	21.38	42.13	21.05	41.71	20.97	40.86	20.76
	-25.0	-25.4	46.68	21.74	46.01	22.35	45.07	22.61	44.33	22.33	43.56	22.03	41.45	21.16
	-19.8	-20.0	48.02	22.56	47.28	23.11	46.46	23.53	45.81	23.27	45.14	22.97	43.81	22.48
	-18.8	-19.0	48.24	22.68	47.49	23.23	46.72	23.72	46.07	23.43	45.43	23.17	44.13	22.67
	-16.7	-17.0	48.67	22.90	47.90	23.43	47.13	23.95	46.59	23.86	45.97	23.61	44.53	22.71
	-13.7	-15.0	49.08	23.24	48.29	23.74	47.50	24.26	46.84	23.88	46.09	23.31	44.54	22.15
	-11.8	-13.0	49.46	23.36	48.65	23.86	47.56	23.63	46.83	23.07	46.09	22.51	44.54	21.32
	-9.8	-11.0	49.82	23.46	48.98	23.92	47.57	22.82	46.84	22.27	46.09	21.70	44.53	20.52
	-9.5	-10.0	49.99	23.40	48.98	23.39	47.57	22.30	46.84	21.73	46.09	21.17	44.53	19.99
	-8.5	-9.1	50.14	23.46	48.98	23.02	47.56	21.93	46.84	21.39	46.08	20.79	44.54	19.65
	-7.0	-7.6	50.34	23.40	48.98	22.37	47.57	21.31	46.83	20.73	46.09	20.17	44.54	19.01
	-5.0	-5.6	49.43	22.14	48.10	21.12	46.73	20.09	46.02	19.53	45.29	18.99	43.77	17.88
	-3.0	-3.7	50.91	21.67	49.53	20.65	48.09	19.55	47.35	19.03	46.59	18.48	45.00	17.48
	0.0	-0.7	54.78	21.45	53.24	20.35	51.65	19.23	50.81	18.64	49.97	18.19	48.20	17.30
	3.0	2.2	61.04	21.94	59.24	20.73	57.36	19.57	56.38	19.09	55.40	18.64	53.26	17.61
	5.0	4.1	66.14	22.48	64.09	21.15	61.96	20.07	60.84	19.54	58.87	18.77	56.85	17.84
	7.0	6.0	75.16	24.04	72.03	22.50	70.00	21.51	67.20	20.45	64.26	19.41	56.85	16.68
	9.0	7.9	76.04	22.89	73.68	21.80	70.00	20.34	67.20	19.25	64.26	18.13	56.85	15.57
	11.0	9.8	78.05	22.24	75.97	21.28	70.10	19.28	67.20	18.27	64.26	17.14	58.54	16.96
	13.0	11.8	79.79	21.46	75.97	20.06	70.10	18.09	67.20	17.15	64.26	16.07	58.54	15.90
	15.0	13.7	82.12	20.88	75.97	18.89	70.10	17.04	67.20	16.16	64.26	17.10	58.54	14.93
18.0	16.6	83.29	19.79	77.36	18.21	70.10	17.79	67.20	16.85	64.26	15.68	58.54	13.82	
21.0	19.5	83.29	17.44	77.36	15.81	70.10	16.24	67.20	15.43	64.26	14.39	58.54	12.56	
24.0	22.4	83.29	15.67	77.36	16.71	70.10	14.81	67.20	14.06	64.26	13.27	58.54	11.45	
27.0	25.3	83.29	16.75	77.36	15.23	70.10	13.34	67.20	12.49	64.26	11.71	58.54	10.13	
30.0	28.1	83.29	17.90	77.36	13.88	70.10	12.01	67.20	11.09	64.26	10.34	58.54	8.96	
60%	-30.0	-30.5	40.24	19.60	39.20	19.54	37.81	19.01	36.61	18.50	36.07	18.36	35.02	18.05
	-25.0	-25.4	41.34	20.40	40.37	20.35	39.14	19.86	38.53	19.63	37.91	19.41	36.67	18.95
	-19.8	-20.0	42.30	21.17	41.38	21.10	40.29	20.64	39.75	20.42	39.20	20.19	38.10	19.74
	-18.8	-19.0	42.46	21.28	41.57	21.25	40.51	20.83	39.97	20.59	39.42	20.35	38.17	19.56
	-16.7	-17.0	42.78	21.48	41.94	21.59	40.77	20.83	40.14	20.37	39.50	19.91	38.17	18.93
	-13.7	-15.0	43.07	21.81	41.99	21.19	40.78	20.31	40.15	19.85	39.51	19.37	38.17	18.38
	-11.8	-13.0	43.15	21.31	41.99	20.45	40.78	19.58	40.15	19.10	39.51	18.64	38.17	17.66
	-9.8	-11.0	43.15	20.59	41.98	19.74	40.77	18.84	40.15	18.38	39.51	17.90	38.18	17.00
	-9.5	-10.0	43.15	20.10	41.98	19.26	40.77	18.37	40.15	17.92	39.51	17.45	38.17	16.62
	-8.5	-9.1	43.16	19.79	41.99	18.93	40.77	18.04	40.14	17.58	39.51	17.11	38.18	16.34
	-7.0	-7.6	43.15	19.21	41.98	18.35	40.77	17.45	40.15	17.01	39.51	16.61	38.17	15.88
	-5.0	-5.6	42.37	18.10	41.23	17.25	40.06	16.40	39.44	16.03	38.82	15.69	37.52	14.99
	-3.0	-3.7	43.64	17.64	42.45	16.80	41.22	16.03	40.59	15.69	39.93	15.35	38.58	14.67
	0.0	-0.7	46.95	17.37	45.63	16.57	44.27	15.89	43.55	15.52	42.82	15.18	41.31	14.46
	3.0	2.2	52.32	17.74	50.78	17.01	49.17	16.27	48.35	15.90	47.47	15.50	45.66	16.45
	5.0	4.1	56.69	18.25	54.94	17.45	53.11	16.65	52.18	16.27	50.46	15.59	48.73	16.62
	7.0	6.0	64.43	19.65	61.74	18.58	60.00	17.78	57.60	16.78	55.51	15.98	48.73	15.02
	9.0	7.9	65.17	18.82	63.16	17.82	60.00	16.50	57.60	15.72	55.51	16.61	48.73	14.17
	11.0	9.8	66.91	18.23	65.12	17.49	60.12	15.60	57.60	16.49	55.51	15.64	48.73	13.28
	13.0	11.8	68.39	17.53	65.12	16.36	60.12	16.41	57.60	15.49	55.51	14.68	48.73	12.40
	15.0	13.7	70.39	16.98	65.12	17.33	60.12	15.61	57.60	14.57	55.51	13.97	50.22	12.05
18.0	16.6	70.39	17.69	65.12	15.93	60.12	14.21	57.60	13.46	55.51	12.59	50.22	10.98	
21.0	19.5	70.39	16.18	65.12	14.68	60.12	12.93	57.60	12.26	55.51	11.80	50.22	9.96	
24.0	22.4	70.39	14.75	65.12	13.38	60.12	11.97	57.60	11.14	55.51	10.63	50.22	9.11	
27.0	25.3	70.39	13.45	65.12	11.81	60.12	10.42	57.60	9.84	55.51	9.23	50.22	7.92	
30.0	28.1	70.61	12.30	65.12	10.43	60.12	9.08	57.60	8.68	55.51	8.01	50.22	6.88	

**Abbreviations:**

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

**Notes:**

Shaded cells indicate rating condition.

Table continued on next page ...

Table 2-8.26: 32HP heating capacity (continued)

CR	Outdoor air temp.		Indoor air temp. °C DB											
			16.0		18.0		20.0		21.0		22.0		24.0	
			TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
°C DB		°C WB		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	
50%	-30.0	-30.5	34.11	17.07	33.07	16.67	32.06	16.41	31.65	16.39	31.23	16.43	30.43	16.56
	-25.0	-25.4	34.99	17.76	34.04	17.38	33.09	17.04	32.62	16.86	32.13	16.69	31.15	16.36
	-19.8	-20.0	35.76	18.40	34.89	18.05	33.98	17.61	33.46	17.26	32.92	16.88	31.81	16.11
	-18.8	-19.0	35.90	18.53	34.99	18.04	33.97	17.34	33.45	16.97	32.92	16.60	31.81	15.83
	-16.7	-17.0	35.96	18.17	34.99	17.48	33.98	16.77	33.46	16.41	32.92	16.04	31.81	15.43
	-13.7	-15.0	35.96	17.68	34.99	17.01	33.97	16.28	33.46	15.93	32.93	15.58	31.81	15.06
	-11.8	-13.0	35.96	17.05	34.99	16.37	33.98	15.64	33.46	15.32	32.93	15.07	31.81	14.51
	-9.8	-11.0	35.97	16.40	34.99	15.69	33.97	15.04	33.45	14.79	32.92	14.53	31.82	13.99
	-9.5	-10.0	35.96	15.98	34.99	15.31	33.98	14.73	33.46	14.45	32.92	14.20	31.81	13.64
	-8.5	-9.1	35.96	15.68	34.99	15.00	33.98	14.48	33.46	14.22	32.92	13.95	31.81	13.41
	-7.0	-7.6	35.96	15.18	34.99	14.57	33.98	14.09	33.45	13.81	32.93	13.55	31.81	12.99
	-5.0	-5.6	35.31	14.26	34.36	13.77	33.37	13.28	32.87	13.03	32.35	12.77	31.27	12.26
	-3.0	-3.7	36.37	13.97	35.38	13.47	34.36	13.00	33.82	12.73	33.28	12.46	32.14	13.28
	0.0	-0.7	39.13	13.86	38.04	13.36	36.89	12.82	36.29	12.55	35.69	13.71	34.43	13.08
	3.0	2.2	43.60	14.23	42.32	13.69	40.97	14.69	40.28	14.36	39.56	14.01	38.05	13.28
	5.0	4.1	47.25	14.60	45.78	13.99	44.25	15.01	43.46	14.64	42.05	14.10	40.61	13.00
	7.0	6.0	53.71	15.68	51.45	16.16	50.00	15.31	48.18	14.53	46.04	13.69	40.61	11.65
	9.0	7.9	54.32	14.66	52.63	15.54	50.00	14.42	48.18	13.72	46.04	12.92	40.61	11.05
	11.0	9.8	55.75	15.88	52.63	14.62	50.00	13.51	48.18	12.87	46.04	12.09	40.61	10.43
	13.0	11.8	56.99	15.24	52.63	13.72	50.00	12.65	48.18	11.98	46.04	11.33	40.61	9.79
15.0	13.7	58.66	15.09	52.63	12.86	50.00	11.88	48.18	11.32	46.04	10.71	41.73	9.41	
18.0	16.6	58.66	13.58	52.63	11.75	50.00	10.83	48.18	10.37	46.04	9.71	41.73	8.47	
21.0	19.5	58.66	12.37	54.26	11.04	50.00	9.83	48.18	9.31	46.04	8.71	41.73	7.56	
24.0	22.4	58.66	11.33	54.26	10.20	50.00	8.95	48.18	8.36	46.04	7.82	41.73	6.85	
27.0	25.3	58.66	9.89	54.26	8.82	50.00	7.80	48.18	7.30	46.04	6.86	41.73	6.14	
30.0	28.1	58.66	8.64	54.26	7.63	50.11	6.81	48.18	6.37	46.04	6.02	41.73	5.51	

Abbreviations:

CR: Combination ratio

TC: Total capacity (kW)

PI: Power input (compressor + outdoor fan motor) (kW)

Notes:

Shaded cells indicate rating condition.

### 8.3 Capacity Correction Factors for Piping Length and Level Difference

Figure 2-8.1: Rate of change in cooling capacity

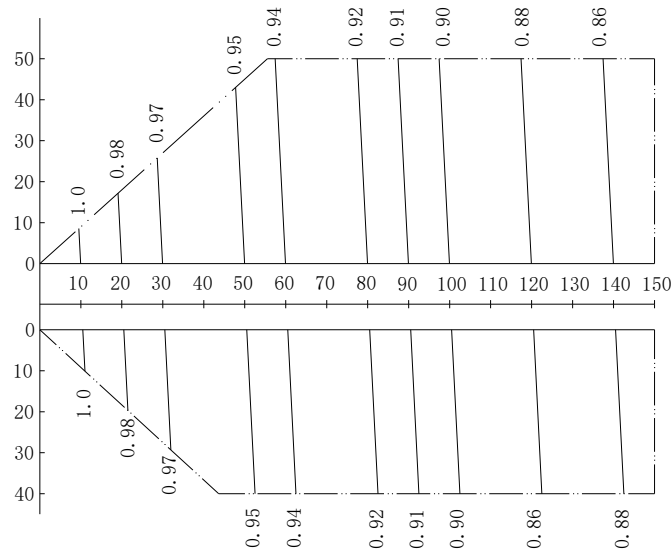
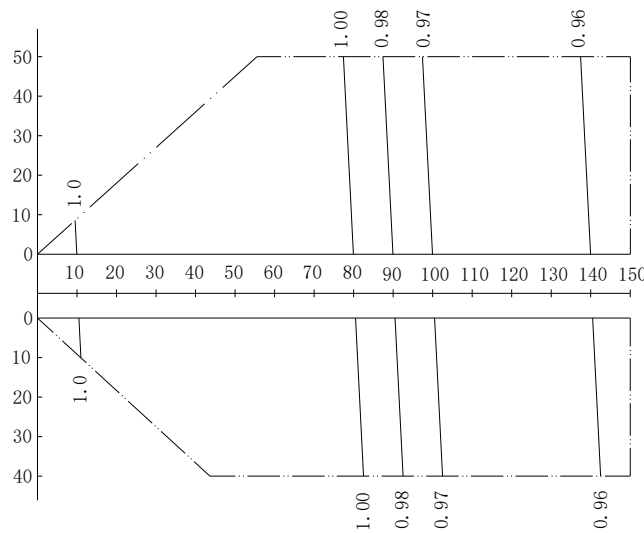


Figure 2-8.2: Rate of change in heating capacity



Notes:

1. The horizontal axis shows equivalent length of piping between farthest indoor unit and first outdoor branch joint; the vertical axis shows the largest level difference between indoor unit and outdoor unit. For level differences, positive values indicate that the outdoor unit is above the indoor unit, negative values indicate that the outdoor unit is below the indoor unit.
2. These figures illustrate the rate of change in capacity of a system with only standard indoor units at maximum load (with the thermostat set to maximum) under standard conditions. Under partial load conditions there is only a minor deviation from the rate of change in capacity shown in these figures.
3. The capacity of the system is either the total capacity of the indoor units obtained from indoor unit capacity tables or the corrected capacity of the outdoor units as per the calculations below, whichever is smaller.

Corrected capacity of outdoor units	=	Capacity of outdoor units obtained from outdoor unit capacity tables at the combination ratio	x	Capacity correction factor
-------------------------------------	---	---	---	----------------------------

8.4 Capacity Correction Factors for Frost Accumulation

The heating capacity tables do not take account of the reduction in capacity when frost has accumulated or while the defrosting operation is in progress. If snow has accumulated against the outside surface of the outdoor unit heat exchanger heating capacity is reduced. The reduction in heating capacity is dependent on a number of factors including the outdoor temperature, the relative humidity and the amount of frosting which has occurred.

Corrected heating capacity values, which take these factors into account, can be calculated as follows, using the correction factors for frost accumulation given in Table 2-8.27:

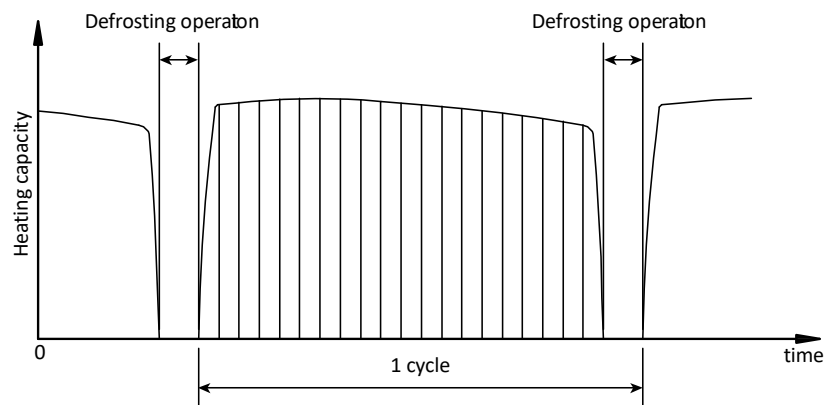
Corrected heating capacity = Value given in outdoor heating capacity table × Correction factor for frost accumulation

Table 2-8.19: Correction factor for frost accumulation

Heat exchanger inlet port temperature (°C / RH 85%)	-7	-5	-2	0	2	5	7
Correction factor for frost accumulation	0.94	0.93	0.89	0.8	0.83	0.88	1

Corrected heating capacities express the heating capacity over the heating/defrosting cycle shown in Figure 2-8.3.

Figure 2-8.3: Defrosting cycle



## 9 Operating Limits

Figure 2-9.1: Cooling operating limits

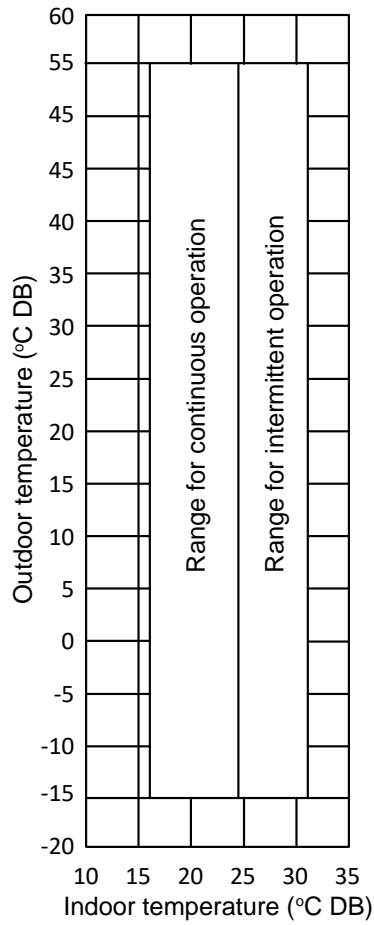
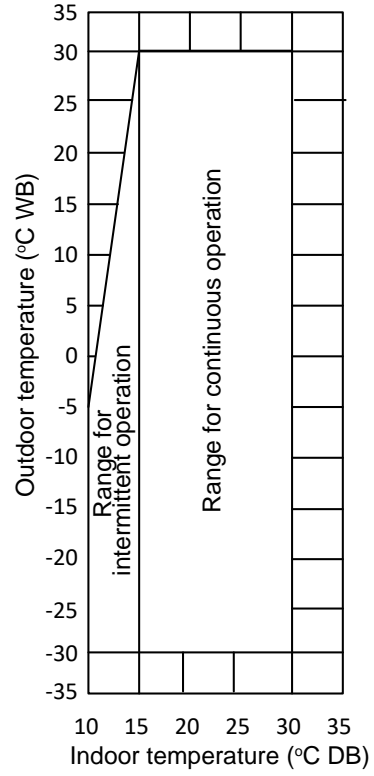


Figure 2-9.2: Heating operating limits



Notes:

1. These figures assume the following operating conditions:
  - Equivalent piping length: 5m
  - Level difference: 0

## 10 Sound Levels

### 10.1 Overall

Table 2-10.1: Sound pressure level

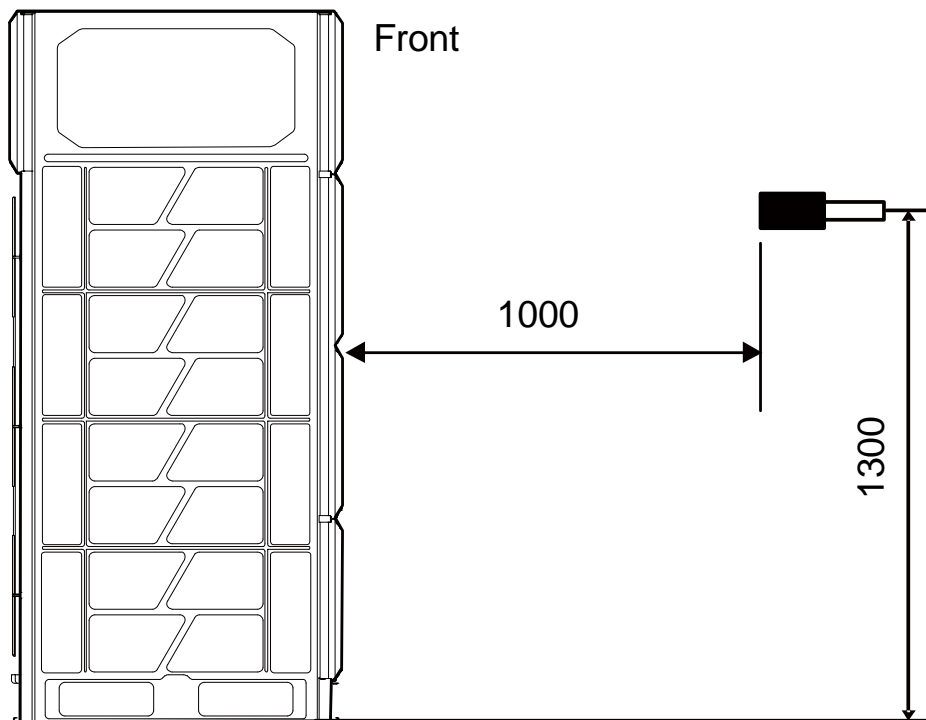
Model	dB(A)
8HP	58
10HP	58
12HP	61
14HP	65
16HP	65
18HP	65
20HP	66
22HP	66
24HP	67
26HP	68
28HP	68
30HP	68
32HP	68
34HP	69
36HP	69

Model	dB(A)
38HP	69
40HP	69
42HP	69
44HP	69
46HP	70
48HP	70
50HP	70
52HP	70
54HP	70
56HP	71
58HP	71
60HP	71
62HP	71
64HP	71
66HP	71

Model	dB(A)
68HP	72
70HP	72
72HP	72
74HP	72
76HP	72
78HP	72
80HP	72
82HP	72
84HP	72
86HP	72
88HP	72
90HP	73
92HP	73
94HP	73
96HP	73

- Notes:
1. Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber. During in-situ operation, sound pressure levels may be higher as a result of ambient noise.

Figure 2-10.1: Sound pressure level measurement (unit: mm)





10.2 Octave Band Levels

Figure 2-10.2: 8HP octave band level

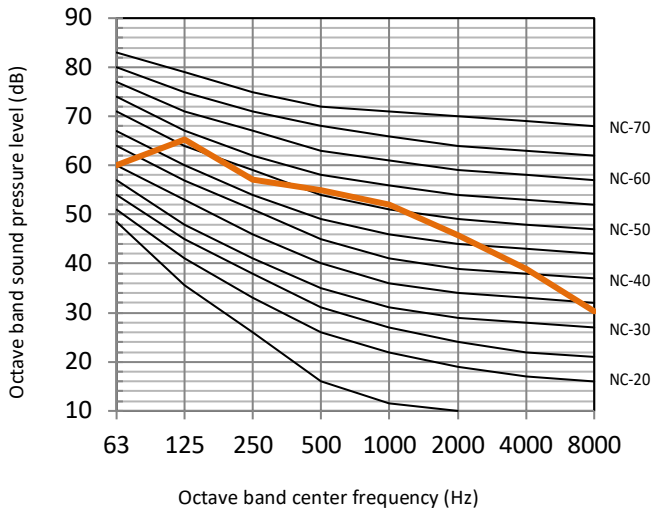


Figure 2-10.3: 10HP octave band level

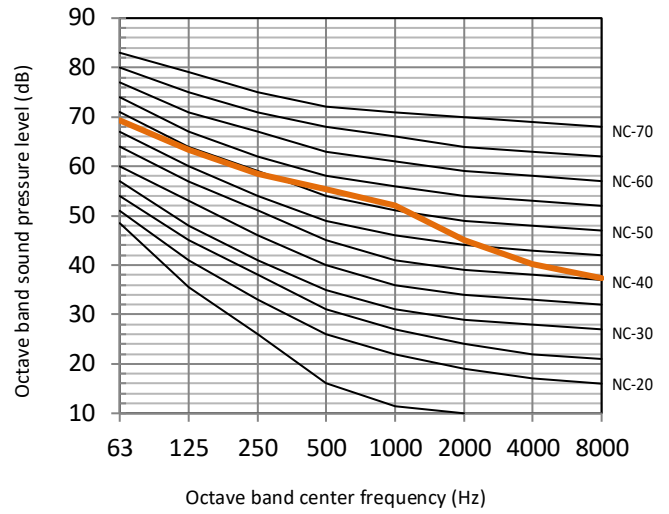


Figure 2-10.4: 12HP octave band level

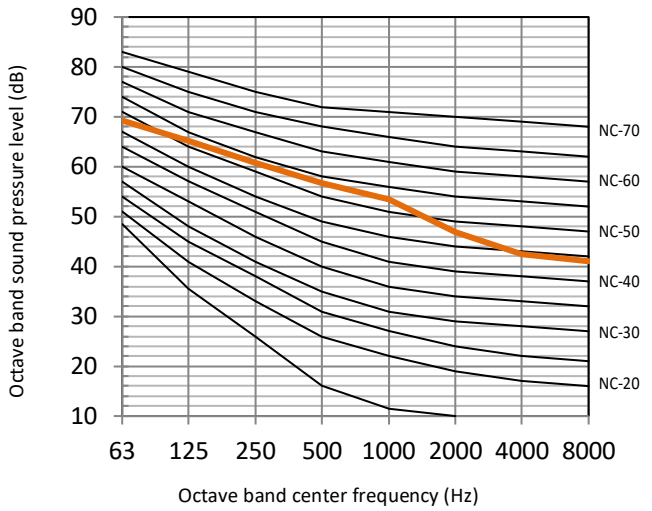


Figure 2-10.5: 14HP octave band level

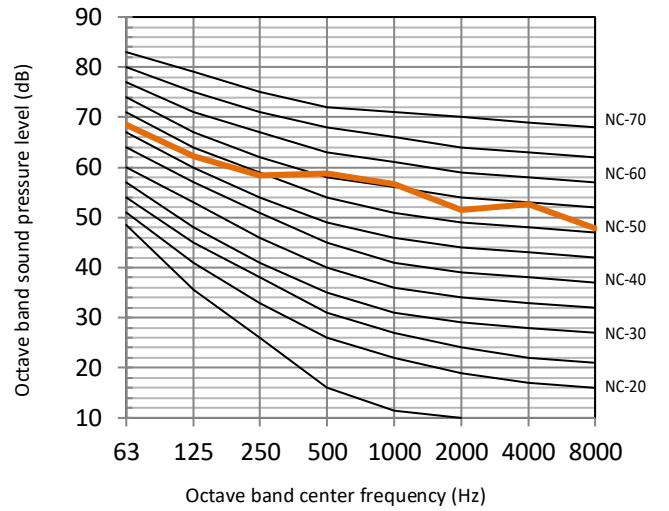


Figure 2-10.6: 16HP octave band level

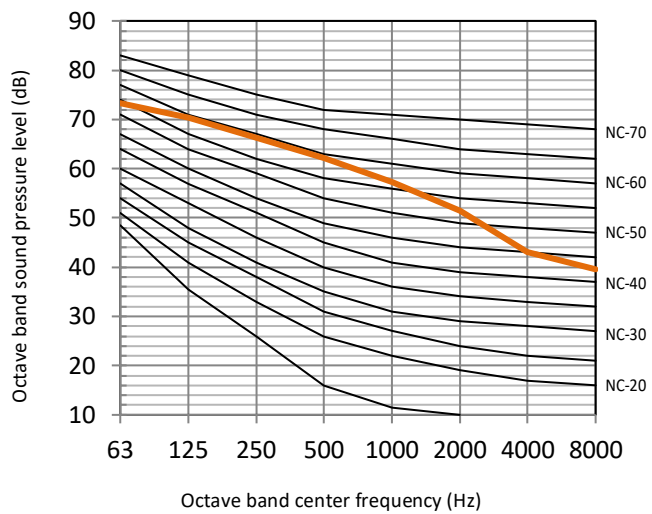


Figure 2-10.7: 18HP octave band level

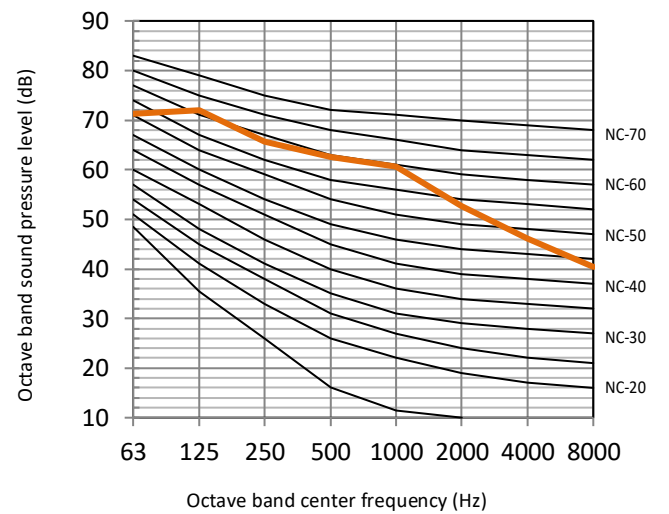


Figure 2-10.8: 20HP octave band level

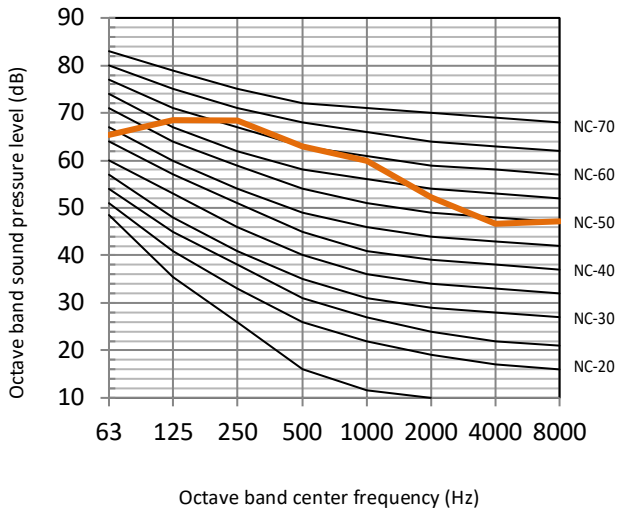


Figure 2-10.9: 22HP octave band level

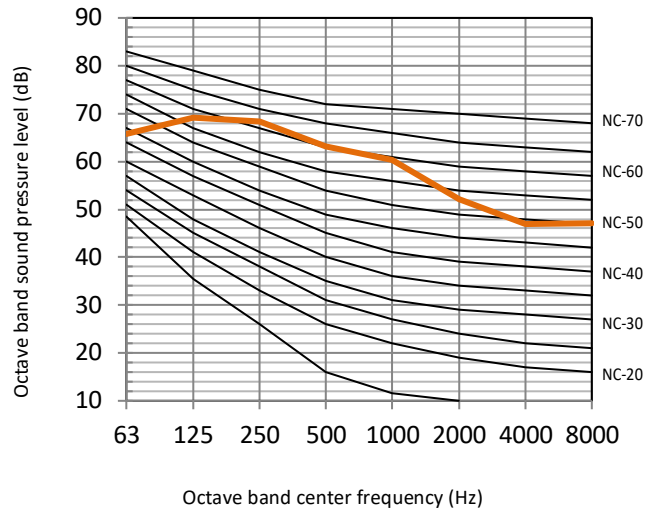


Figure 2-10.10: 24HP octave band level

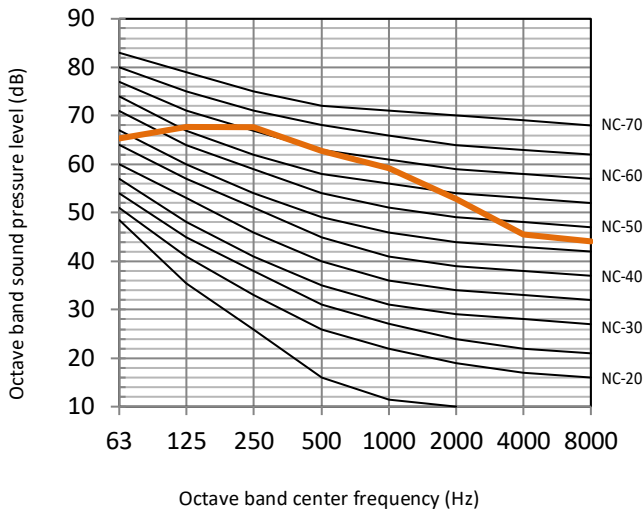


Figure 2-10.11: 26HP octave band level

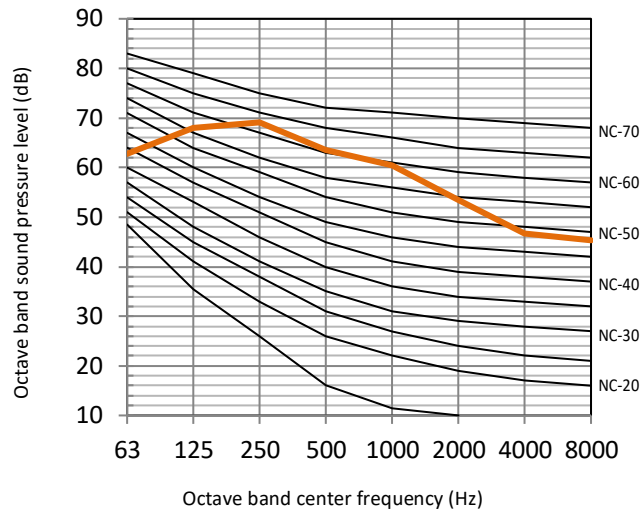


Figure 2-10.12: 28HP octave band level

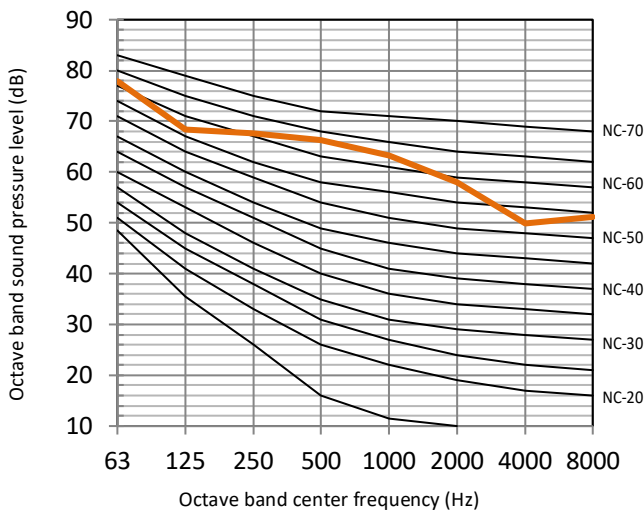
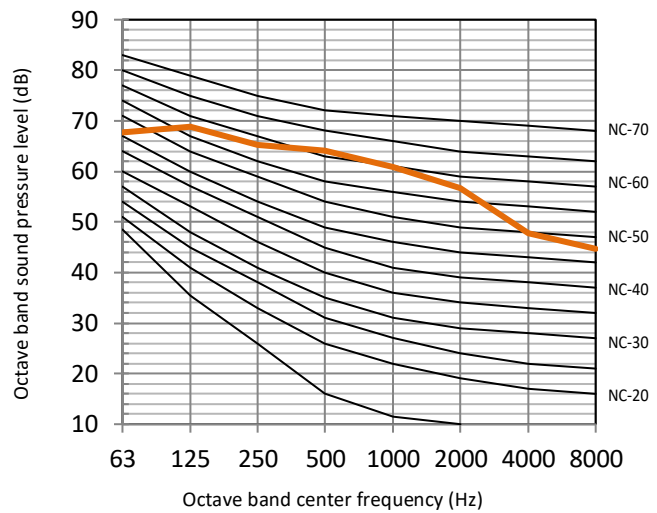
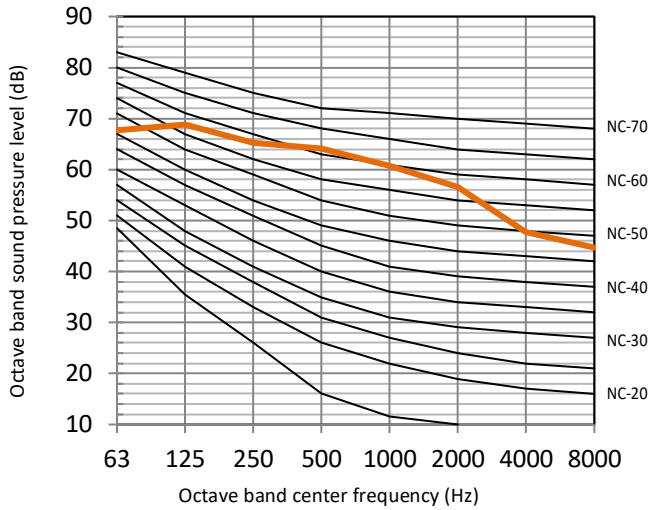


Figure 2-10.13: 30HP octave band level



*Figure 2-10.14: 32HP octave band level*


## 11 Accessories

### 11.1 Standard Accessories

*Table 2-11.1: Standard accessories*

Name	Shape	Quantity	Function
Owner's and installation manual		1	
Erp information		1	
L-shaped connection pipe		2	To connect gas and liquid pipes
Wrench		1	Removing the side plate screws
Build-out resistor		1	Enhances communication stability
Bluetooth Module		1	Refer to attached manual
Magnetic ring		1	Improve communication reliability

## L-shaped pipe

Figure 2-11.1: L-shaped pipe size (unit: mm)

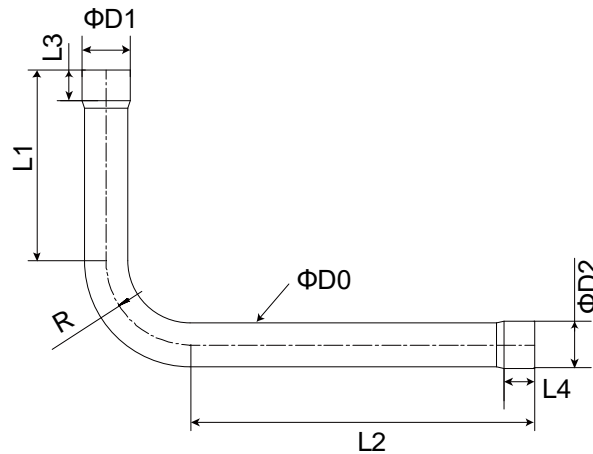


Figure 2-11.2: L-shaped pipe size (unit: mm)

HP	PIPE	Φ D0(OD)	L1	L2	L3	L4	Φ D1(ID)	Φ D2(ID)	R
8-12HP	Gas pipe	25.4	130	230	20	20	25.4	25.4	50
	Liquid pipe	12.7	160	265	15	15	12.7	12.7	25
14-16HP	Gas pipe	28.6	125	225	20	20	28.6	28.6	55
	Liquid pipe	15.9	155	255	15	15	15.9	15.9	30
18-24HP	Gas pipe	31.8	130	220	25	20	28.6	31.8	60
	Liquid pipe	19.1	162	245	15	15	15.9	19.1	40
26HP	Gas pipe	31.8	130	130	25	25	31.8	31.8	60
	Liquid pipe	22.2	165	165	20	20	22.2	22.2	40
28-32HP	Gas pipe	38.1	155	115	20	20	34.9	38.1	80
	Liquid pipe	22.2	165	165	20	20	22.2	22.2	40

## 11.2 Optional Accessories

Table 2-11.3: Optional accessories

Optional accessories	Model	Packed dimensions (mm)	Net/gross weight (kg)	Function
Outdoor branch joint kits	FQZHW-02N1E	255×150×185	1.8 / 2.0	Distribute refrigerant to indoor units and balance flow resistance between outdoor units
	FQZHW-02N1G	405×120×270	2.3 / 2.8	
	FQZHW-03N1E	345×160×285	3.7 / 4.3	
	FQZHW-03N1G	585×340×140	4.2 / 5.0	
Indoor branch joint kits	FQZHN-01D	290×105×100	0.3 / 0.4	
	FQZHN-02D	290×105×100	0.4 / 0.6	
	FQZHN-03D	310×130×125	0.6 / 0.9	
	FQZHN-04D	350×170×180	1.1 / 1.5	
	FQZHN-05D	365×195×215	1.4 / 1.9	
	FQZHN-06D	390×230×255	2.5 / 3.1	
	FQZHN-07D	390×230×255	2.8 / 3.4	

# Part 3

# System Design and Installation

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## 1 Preface to Part 3

### 1.1 Notes for Installers Boxes

The information contained in this Engineering Data Book may primarily be of use during the system design stage of a MDV8 ECO Series VRF project. Additional important information which may primarily be of use during field installation has been placed in boxes, such as the example below, titled “Notes for installers”.

#### Notes for installers



- Notes for installers boxes contain important information which may primarily be of use during field installation, rather than during desk-based system design.

### 1.2 Definitions

In this Engineering Data Book, the term “applicable legislation” refers to all national, local and other laws, standards, codes, rules, regulations and other legislation that apply in a given situation.

### 1.3 Precautions

All system installation including installation of piping and electrical works must only be carried out by competent and suitably qualified, certified and accredited professionals and in accordance with all applicable legislation.

## 2 Unit Placement and Installation

### 2.1 Outdoor Units

#### 2.1.1 Placement considerations

Placement of outdoor units should take account of the following considerations:

- Air conditioners should not be exposed to direct radiation from a high-temperature heat source.
- Air conditioners should not be installed in positions where dust or dirt may affect heat exchangers.
- Air conditioners should not be installed in locations where exposure to oil or to corrosive or harmful gases, such as acidic or alkaline gases, may occur.
- Air conditioners should not be installed in locations where exposure to salinity may occur unless the anti-corrosion treatment for high-salinity areas customization option has been added and the precautions described in Part 3, 10 “Installation in Areas of High Salinity” are taken.
- Outdoor units should be installed in well-drained, well-ventilated positions that are as close as possible to the indoor units.

#### 2.1.2 Spacing

Outdoor units must be spaced such that sufficient air may flow through each unit. See Part 2-3 “Installation Space Requirements” for details about the spacing requirements in different scenarios.

If the particular circumstances of an installation require a unit to be placed closer to a wall than specified in *Figure 2-3.1* to *Figure 2-3.4*, a discharge duct should be installed. Refer to Part 3, 3 “Outdoor Unit Ducting and Shielding”. Depending on the height of adjacent walls relative to the height of the units, ducting may be required. Refer to Part 3, 3 “Outdoor Unit Ducting and Shielding”.

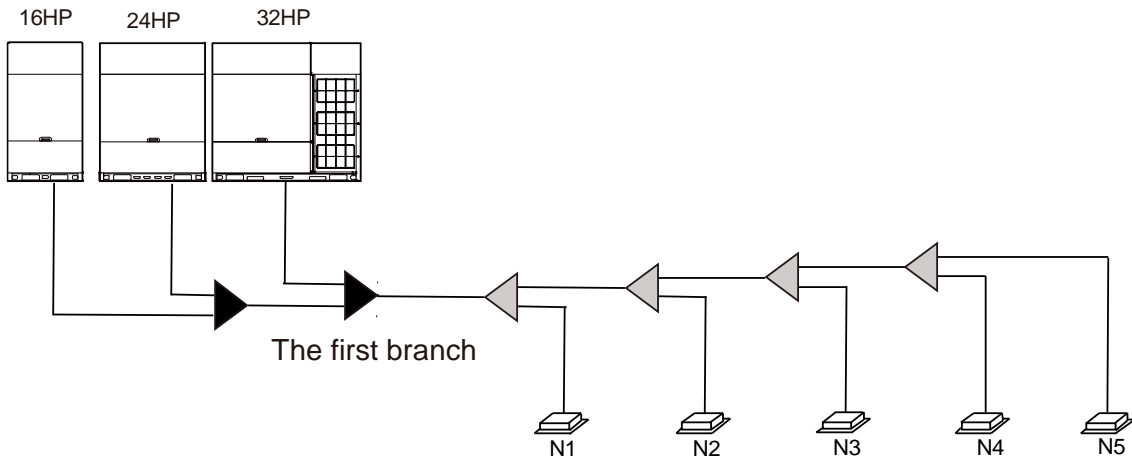
## 2.1.3 Master and slave unit positioning

In systems with multiple outdoor units, the units should be placed in order from largest capacity unit to smallest capacity unit. The largest capacity unit must be placed on the first branch, and be set as the master unit, while the others should be set as slave units. Refer to the MDV8 ECO Service Manual, Part 4 for details of how to set units as master/slave.

The example in Figure 3-2.1 illustrates the placing of units in a 72 (32+24+16) HP combination:

- Place the 32HP unit on the first branch and set it as the master unit.
- Place the 24HP and 16HP units on the next branches and set them as slave units.

Figure 3-2.1: Positioning of master and slave units



## 2.1.4 Base structures

Outdoor unit base structure design should take account of the following considerations:

- The base of the outdoor unit must use the solid concrete surface as the cement base or the steel beam frame base.
- The base must be completely level to ensure that every point of contact is even.
- During installation, make sure the base supports the vertical folds of the front and back under plates of the chassis directly as the vertical folds of the front and back under plates are unit where the actual support for the unit load is.
- No gravel layer is required when the base is built on the roof surface, but the sand and cement on the concrete surface must be level, and the base should be chamfered along the edge.
- A water drainage ditch should be set around the base to drain the water around the equipment. Potential risk: slip.
- Check the load-bearing capacity of the roof to make sure it can support the load.
- When you choose to install the piping from the bottom, the base height should be above 200mm.
- Make sure the base where the unit is installed is strong enough to prevent vibrations and noise.
- Use six ground bolts (M8) to secure the unit in place. Best is to screw in the ground bolt until it is embedded in the base surface by at least 3 threads.
- Please refer to the Figure 3-2.3 below for the installation position of expansion bolts.

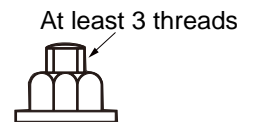




Figure 3-2.2: Outdoor unit typical concrete base structure design (unit: mm)

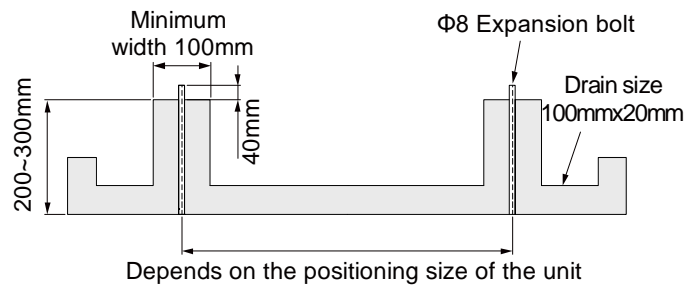


Figure 3-2.3 : Expansion bolt positioning

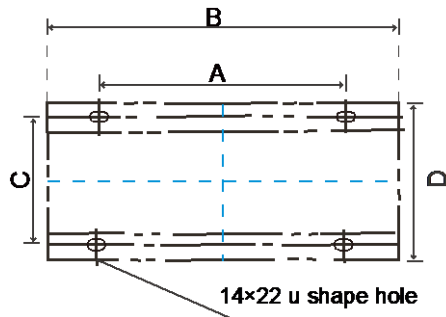


Table 3-2.1: Expansion bolt spacings (unit: mm)

Dimension	8-16HP	18-24HP	26-32HP
A	705	1105	1645
B	960	1360	1900
C	710	710	710
D	850	850	850

### 2.1.5 Acceptance and unpacking

#### Notes for installers



- When units are delivered check whether any damage occurred during shipment. If there is damage to the surface or outside of a unit, submit a written report to the shipping company.
- Check that the model, specifications and quantity of the units delivered are as ordered.
- Check that all accessories ordered have been included. Retain the Installation and Owner's Manual for future reference.

### 2.1.6 Hoisting

#### Notes for installers



- Do not remove any packaging before hoisting. If units are not packaged or if the packaging is damaged, use suitable boards or packing material to protect the units.
- Hoist one unit at a time, using two ropes to ensure stability.
- Keep units upright during hoisting, ensuring that the angle to the vertical does not exceed 30°.
- It is better to use a crane and two long belts to lift the unit as per Figure 3-2.4.
- Handle the unit carefully to protect it, and note the position of the center of gravity of the unit.

Figure 3-2.4: Hoisting

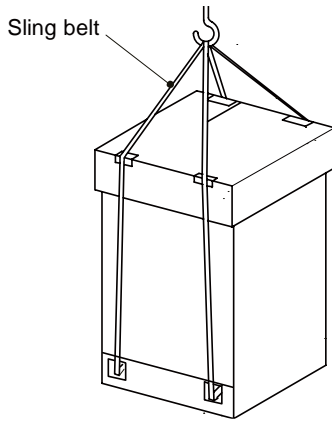


Figure 3-2.5: 8-16HP Center of gravity

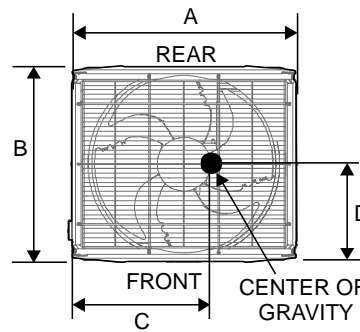


Figure 3-2.9: 18-32HP Center of gravity

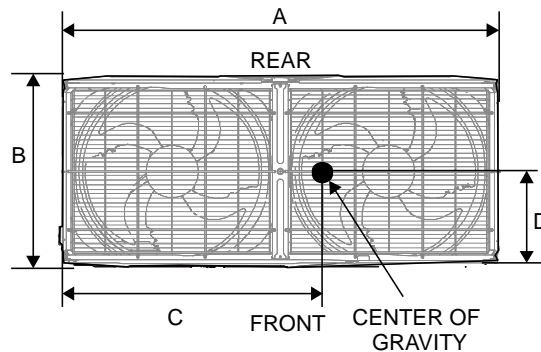


Table 3-2.2: Center of gravity (unit: mm)

Dimension	8-12HP	14-16HP	18-20HP	22-24HP	26HP	28-32HP
A	940	940	1340	1340	1880	1880
B	825	825	825	825	825	825
C	504	466	610	651	885	825
D	453	507	492	448	441	456

## 2.2 Indoor Units

### 2.2.1 Placement considerations

Placement of indoor units should take account of the following considerations:

- Sufficient space for drain piping and for access during servicing and maintenance should be allowed.
- To ensure a good cooling/heating effect, short-circuit ventilation (where outlet air returns quickly to a unit’s air inlet) should be avoided.
- To prevent excessive noise or vibration during operation, suspension rods or other weight-bearing fixings should typically be able to bear twice the unit’s weight.

#### Notes for installers



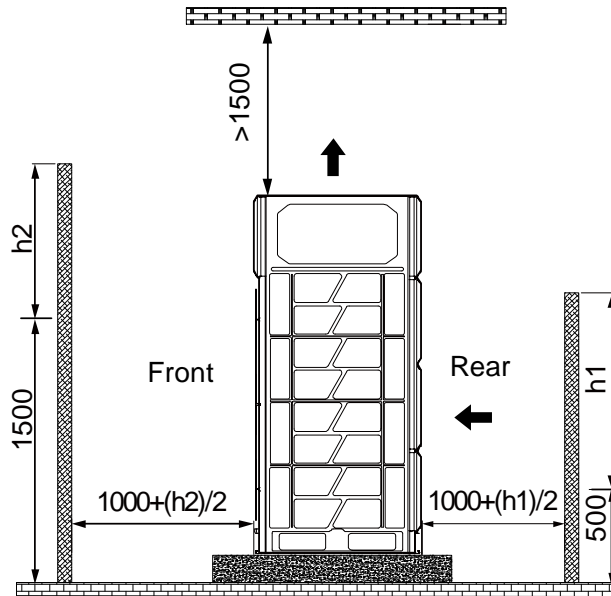
- Before installing an indoor unit, check that the model to be installed is as specified in the construction drawings and confirm the correct orientation of the unit.
- Ensure that units are installed at the correct height.
- To allow smooth condensate drainage and to ensure unit stability (to prevent excessive noise or vibration), ensure that units are level to within 1° of the horizontal. If a unit is not level to within 1° of the horizontal, water leakage or abnormal vibration/noise may occur.

### 3 Outdoor Unit Ducting and Shielding

#### 3.1 Ducting Requirements

Depending on the height of adjacent walls relative to the height of the units, ducting may be required to ensure proper air discharge. In the situation depicted in Figure 3-3.1, when the space over the unit is less than 1500mm, ducting is required to ensure proper air discharge. When the space over the unit is greater than 1500mm, ducting may be required if the air discharge is not smooth.

Figure 3-3.1: Top of unit below top of adjacent wall unit (mm)

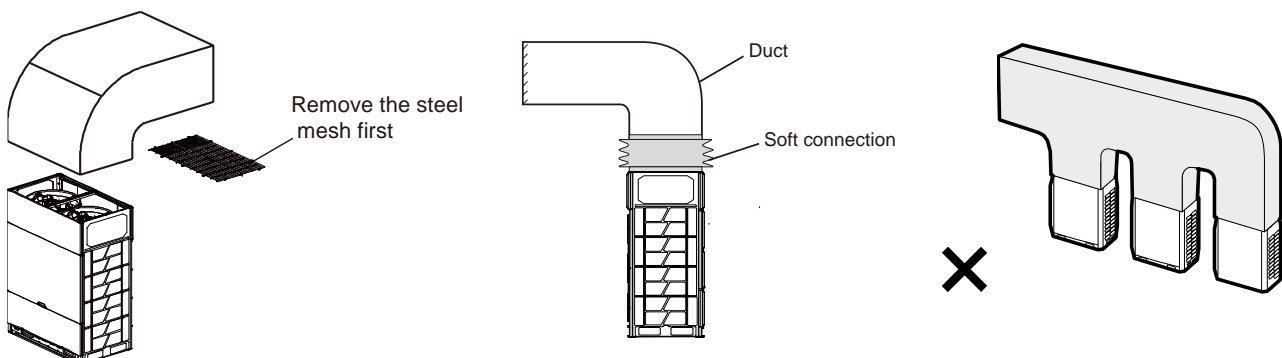


#### 3.2 Design Considerations

Outdoor unit ducting design should take account of the following:

- Before installing outdoor unit ducting, be sure to remove the unit's steel mesh cover; otherwise, airflow will be adversely affected.
- Each duct should contain no more than one bend.
- Vibration isolation should be added to the connection between the unit and the ducting to avoid vibration/noise.
- If more than one outdoor units need ducting, each outdoor unit should have independent ducting, it cannot share one ducting for more than one outdoor units.
- Installing louvers is required as doing for safety, they should be installed at an angle no greater than 15° to the horizontal, to minimize the impact on airflow.
- According to the actual static pressure of the outdoor unit ducting, select an appropriate static pressure mode.

Figure 3-3.2: Ducting requirements



3.3 Transverse Ducting

Figure 3-3.3: Transverse ducting (unit: mm)

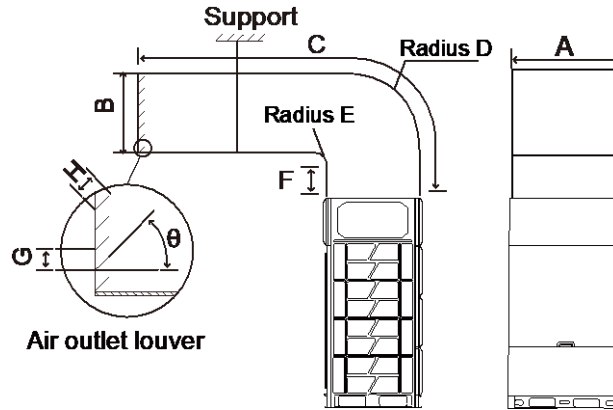


Table 3-3.1: Duct dimensions (unit: mm)

	8-16HP	18-24HP	26-32HP
A	800	1290	1680
B	770≤B≤800	770≤B≤800	770≤B≤800
C	≤ 3000	≤ 3000	≤ 3000
D	E+770	E+770	E+770
E	≥ 300	≥ 300	≥ 300
F	≥ 250	≥ 250	≥ 250
θ	θ ≤ 15°	θ ≤ 15°	θ ≤ 15°
G	≥ 100	≥ 100	≥ 100
H	≤ 90	≤ 90	≤ 90

Table 3-3.2: External static pressure

ESP (Pa)	Remarks
0	Factory default
0 – 20	Remove steel mesh and connect to duct < 3m long
> 20	Customization option

3.4 Longitudinal Ducting

Figure 3-3.4: Longitudinal ducting units (unit: mm)

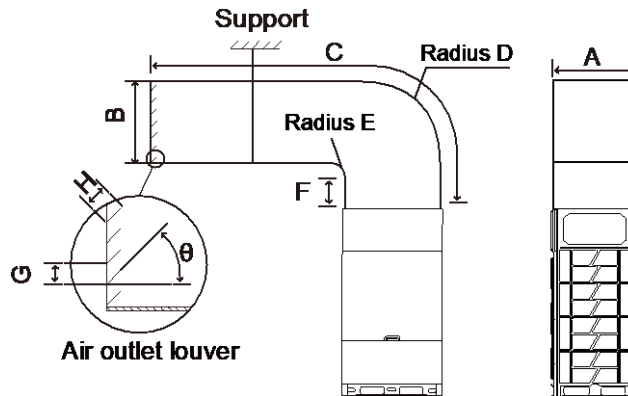


Table 3-3.3: Duct dimensions (unit: mm)

	8-16HP	18-24HP	26-32HP
A	770	770	770
B	820	1310	1700
C	≤ 3000	≤ 3000	≤ 3000
D	E+800	E+1290	E+1680
E	≥ 300	≥ 300	≥ 300
F	≥ 250	≥ 250	≥ 250
θ	θ ≤ 15°	θ ≤ 15°	θ ≤ 15°
G	≥ 100	≥ 100	≥ 100
H	≤ 90	≤ 90	≤ 90

Table 3-3.4: External static pressure

ESP (Pa)	Remarks
0	Factory default
0 – 20	Remove steel mesh and connect to duct < 3m long
> 20	Customization option

### 3.5 Fan Performance

The default external static pressure of outdoor units' air outlets is zero. With the steel mesh cover removed the external static pressure is 20Pa. Static pressure exceeds 20Pa needs to be customized.

Figure 3-3.5: 8-12HP units fan performance

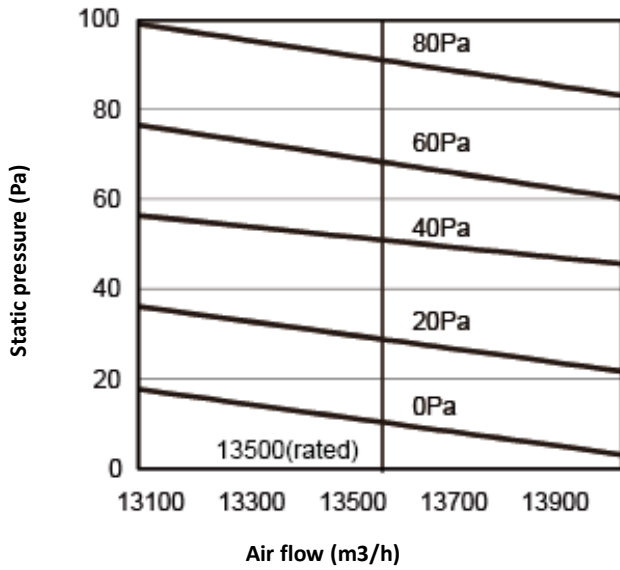


Figure 3-3.6: 14-16HP units fan performance

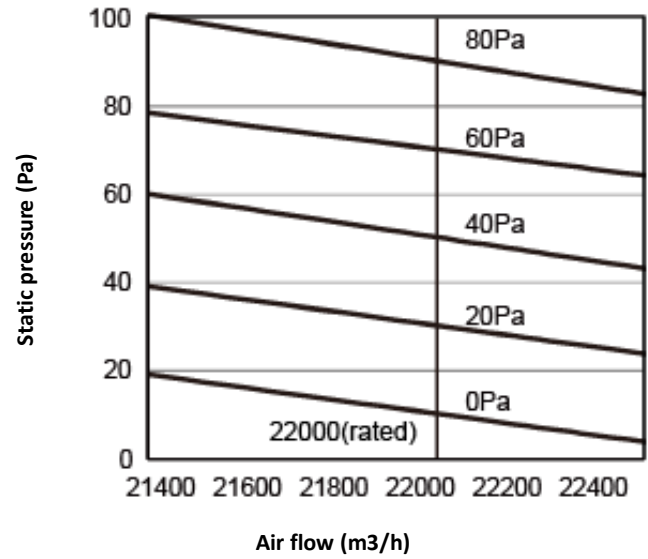


Figure 3-3.7: 18-24HP units fan performance

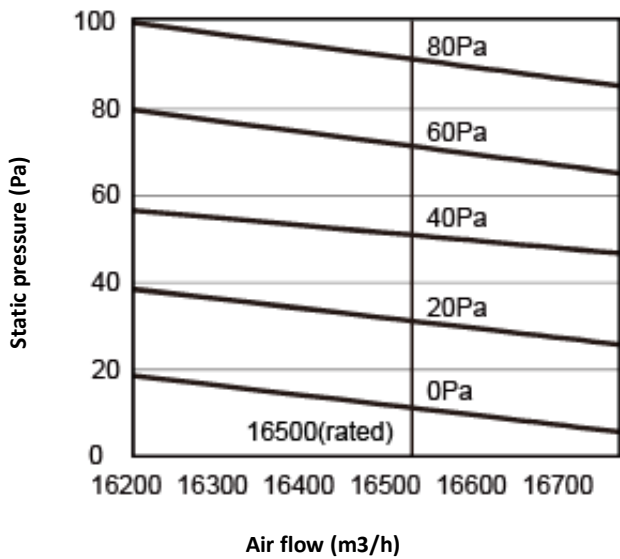
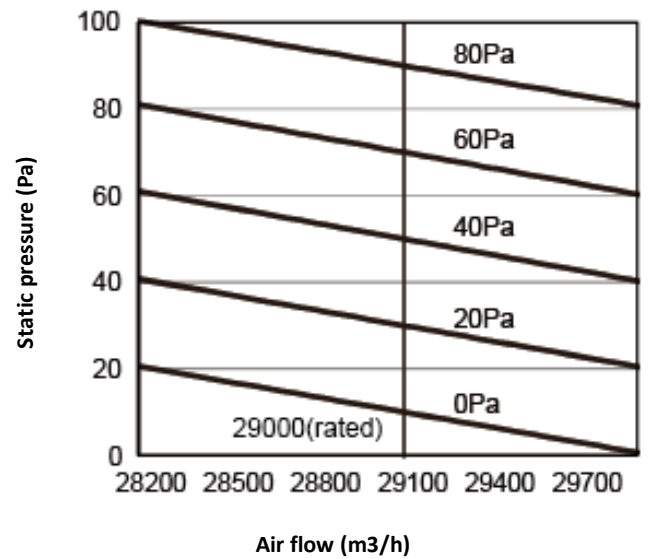


Figure 3-3.8: 26-32HP units fan performance



#### Notes for installers



- Before installing outdoor unit ducting, be sure to remove the unit's steel mesh cover, otherwise airflow will be adversely affected.

3.6 Snow Shielding

In areas of high snowfall, snow shields should be installed on air inlets and outlets to prevent snow from entering the units. Make note of the following when installing the unit in areas affected by cold weather or snow:

- Avoid directly exposing the air outlet or air inlet to the wind.
- The local maximum snowfall should be taken into consideration when deciding the foundation height of ODU.
- The foundation or base height of the ODU is required to be the expected maximum snowfall thickness  $h_0 + 300\text{mm}$ , preventing the snow from contacting the bottom of the unit.

Figure 3-3.9: Outdoor unit snow shielding

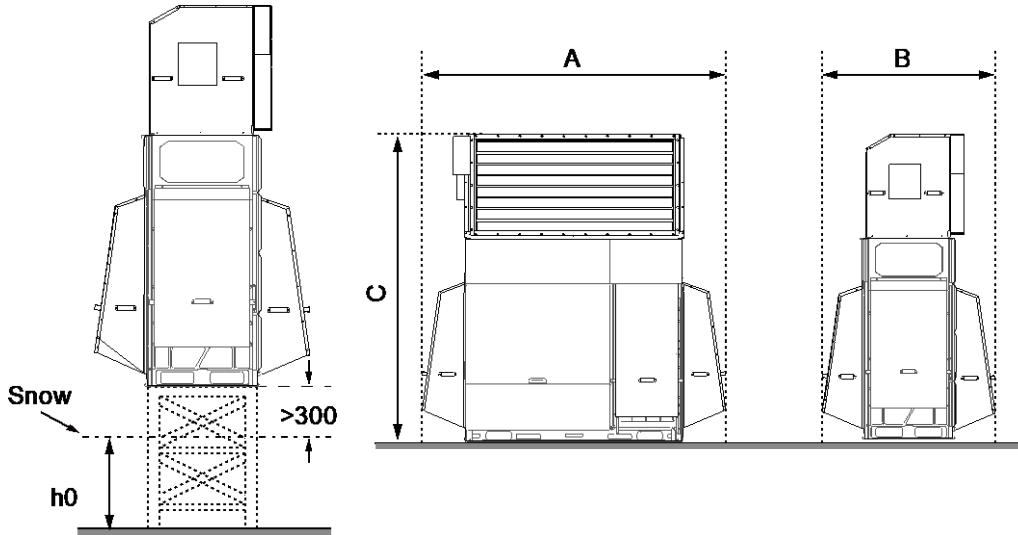


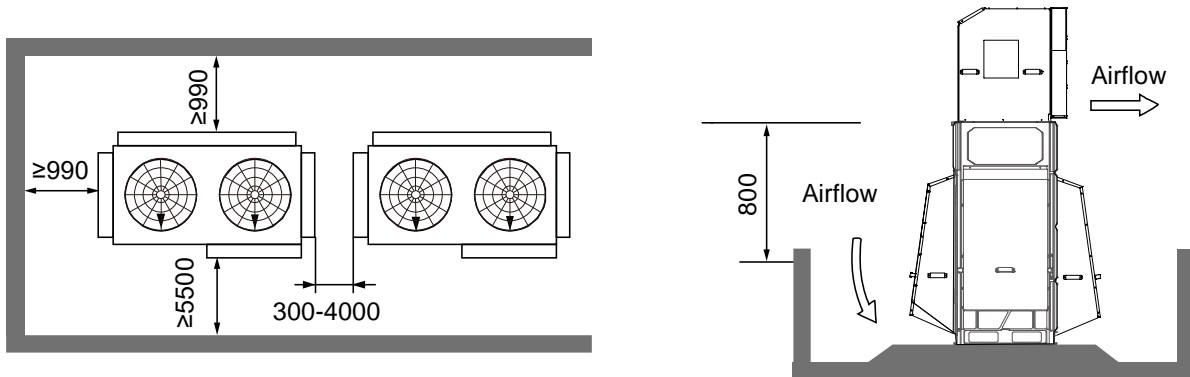
Table 3-3.5: Dimensions (unit: mm)

	8-16HP	18-24HP	26-32HP
A	1690	1200	2685
B	2090	1200	2685
C	1630	1575	2685

When a snow shield needs to be installed, to ensure smooth air intake and supply of the ODU, conduct site planning and construction as follows:

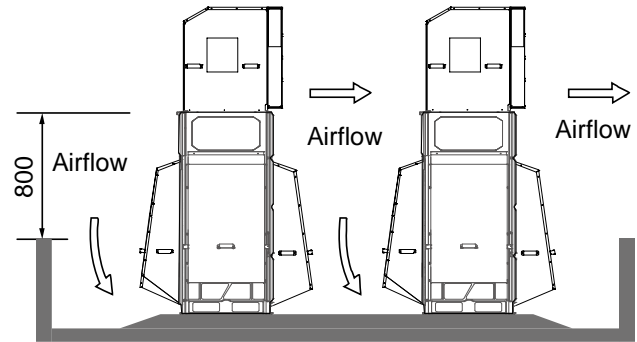
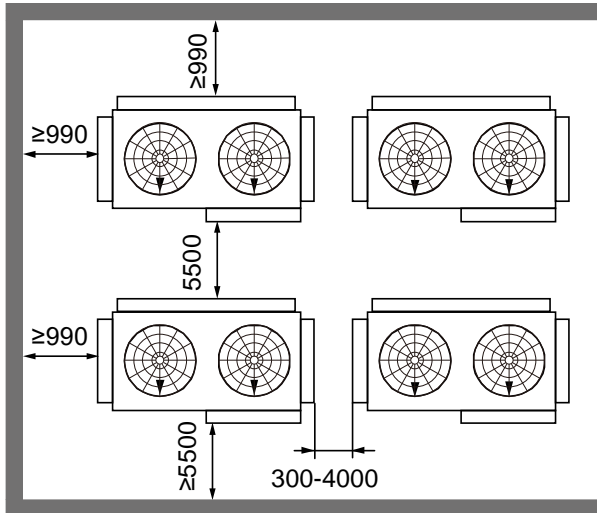
Installation of ODUs in a row

Figure 3-3.10: Installation of ODUs in a row (unit: mm)



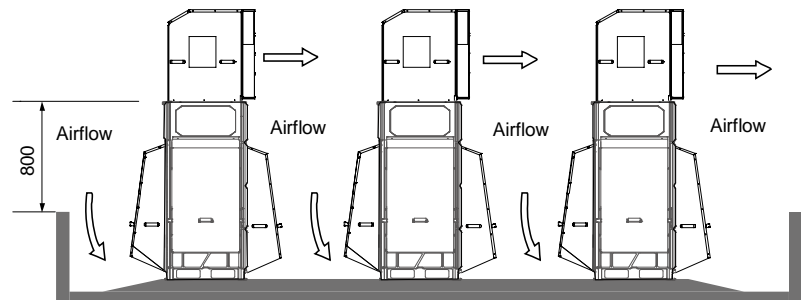
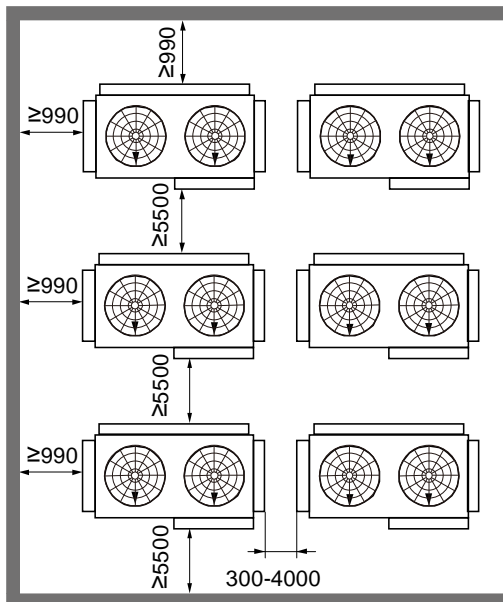
**Installation of ODUs in two rows**

Figure 3-3.10: Installation of ODUs in two row (unit: mm)



**Installation of ODUs in three rows**

Figure 3-3.10: Installation of ODUs in two row (unit: mm)



## 4 Refrigerant Piping Design

### 4.1 Design Considerations

Refrigerant piping design should take account of the following considerations:

- The amount of brazing required should be kept to a minimum.
- On the two inside sides of the first indoor branch joint ("A" in Figures 3-4.2, 3-4.3 and 3-4.4) the system should, as far as possible, be equal in terms of number of units, total capacities and total piping lengths.

### 4.2 Material Specification

Only seamless phosphorus-deoxidized copper piping that complies with all applicable legislation should be used. Temper grades and minimum thicknesses for different diameters of piping are specified in Table 3-4.1.

Table 3-4.1: Piping temper and thickness

Piping outer diameter (mm)	Temper <sup>1</sup>	Minimum thickness (mm)
Φ6.35	O (annealed)	0.80
Φ9.52		0.80
Φ12.7		1.00
Φ15.9		1.00
Φ19.1		1.00
Φ22.2	1/2H (half hard)	1.00
Φ25.4		1.00
Φ28.6		1.00
Φ31.8		1.25
Φ34.9		1.25
Φ38.1		1.50
Φ41.3		1.50
Φ44.5		1.50
Φ50.8		1.80
Φ54.0		1.80

Notes:

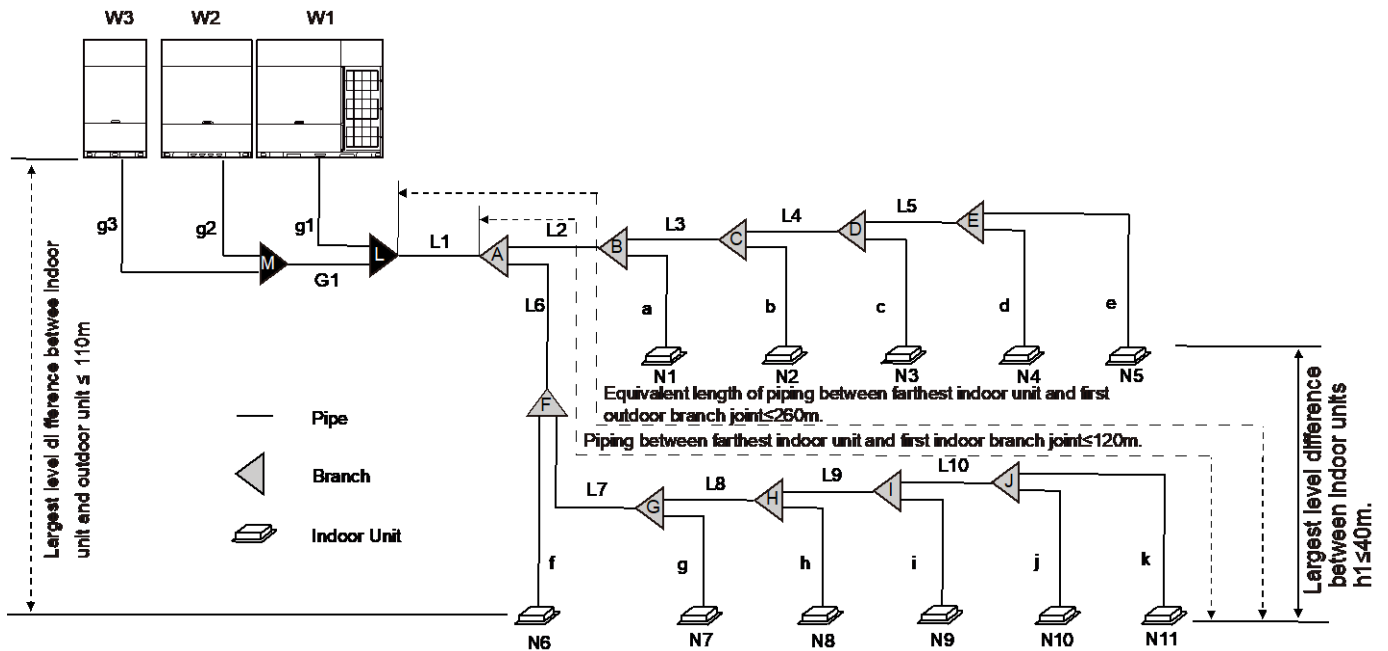
1. O: coiled piping; 1/2H: straight piping.



### 4.3 Permitted Piping Lengths and Level Differences

The piping length and level difference requirements that apply are summarized in Table 3-4.2 and are fully described as follows (refer to Figure 3-4.1):

Figure 3-4.1: Permitted refrigerant piping lengths and level differences



Legend		
L <sub>1</sub>	Main pipe	Figures in parentheses indicate indoor unit capacity indexes.
L <sub>2</sub> to L <sub>10</sub>	Indoor main pipes	
a to k	Indoor auxiliary pipes	
A to J	Indoor branch joints	
L, M	Outdoor branch joints	
g <sub>1</sub> to g <sub>3</sub> , G <sub>1</sub>	Outdoor connection pipes	

Table 3-4.2: Summary of permitted refrigerant piping lengths and level differences

		Permitted values	Piping in Figure 3-4.2	
Piping lengths	Total piping length <sup>1</sup>	≤ 1100m	$L_1 + 2 \times \sum\{L_2 \text{ to } L_{10}\} + \sum\{a \text{ to } k\}$	
	Piping between farthest indoor unit and first outdoor branch joint <sup>2</sup>	Actual length	≤ 220m	$L_1 + \sum\{L_6 \text{ to } L_{10}\} + k$
		Equivalent length	≤ 260m	
	Piping between farthest indoor unit and first indoor branch joint <sup>3</sup>		≤ 40m/120m	$\sum\{L_6 \text{ to } L_{10}\} + k$
Piping between outdoor unit and outdoor branch joint	Actual length	≤ 10m	$g_1 + G_1 \leq 10m; g_2 + G_1 \leq 10m; g_3 \leq 10m$	
Level differences	Largest level difference between indoor unit and outdoor unit <sup>4</sup>	≤ 110m		
	Largest level difference between indoor units <sup>5</sup>	≤ 40m		

Notes:

1. Refer to Requirement 1, below.
2. Refer to Requirement 2, below.
3. Refer to Requirement 3, below.
4. Refer to Requirement 4, below.
5. Refer to Requirement 5, below.

1. **Requirement 1:** The total length of piping in one refrigerant system should not exceed 1100m. When calculating the total length of piping, the actual length of the indoor main pipes (the piping between the first indoor branch joint and all other indoor branch joints,  $L_2$  to  $L_{10}$ ) should be doubled.
2. **Requirement 2:** The piping between the farthest indoor unit ( $N_{11}$ ) and the first outdoor branch joint ( $L$ ) should not exceed 220m (actual length) and 260m (equivalent length). (The equivalent length of each branch joint is 0.5m, and the equivalent length of each branch header is 1m.)
3. **Requirement 3:** The piping between the farthest indoor unit ( $N_{11}$ ) and first indoor branch joint ( $A$ ) should not exceed 40m in length ( $\sum\{L_6 \text{ to } L_{10}\} + k \leq 40\text{m}$ ) unless the following conditions are met and the following measures are taken, in which case the permitted length is up to 120m:

**Conditions:**

- a) Each indoor auxiliary pipe (from each indoor unit to its nearest branch joint) joint does not exceed 40m in length (a to k each  $\leq 40\text{m}$ ).
- b) The difference in length between {the piping from first indoor branch joint ( $A$ ) to the farthest indoor unit ( $N_{11}$ )} and {the piping from the first indoor branch joint ( $A$ ) to the nearest indoor unit ( $N_1$ )} does not exceed 40m. That is:  $(\sum\{L_6 \text{ to } L_{10}\} + k) - (L_2 + a) \leq 40\text{m}$ .

**Measures:**

- a) Increase the diameter of the indoor main pipes (the gas and liquid piping between the first indoor branch joint and all other indoor branch joints,  $L_2$  to  $L_{10}$ ) as per Table 3-4.3, except for indoor main pipes which are already the same size as the main pipe ( $L_1$ ), for which no diameter increases are required.
4. **Requirement 4:** The largest level difference between indoor unit and outdoor unit should not exceed 110m. Additionally: (i) If the outdoor unit is above and the level difference is greater than 20m, it is recommended that an oil return bend with dimensions as specified in Figure 3-4.2 is set every 10m in the gas pipe of the main pipe; and (ii) if the level difference is more than 50m (the outdoor unit is above) or 40m (the outdoor unit is below), the liquid pipe of the main pipe ( $L_1$ ) should be selected according to Table 3-4.5 (Equivalent length to the farthest IDU  $\geq 90\text{m}$ .)

Table 3-4.3: Diameter increase requirements

Original (mm)	Increased (mm)
Φ9.52	Φ12.7
Φ12.7	Φ15.9
Φ15.9	Φ19.1
Φ19.1	Φ22.2
Φ22.2	Φ25.4
Φ25.4	Φ28.6
Φ28.6	Φ31.8
Φ31.8	Φ38.1
Φ38.1	Φ41.3
Φ41.3	Φ44.5
Φ44.5	Φ50.8
Φ50.8	Φ54.0

Figure 3-4.2: Oil return bend

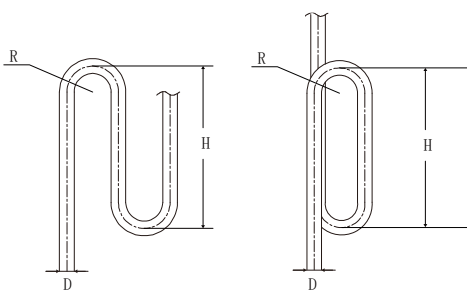


Table 3-4.4: Oil return bend requirements unit (mm)

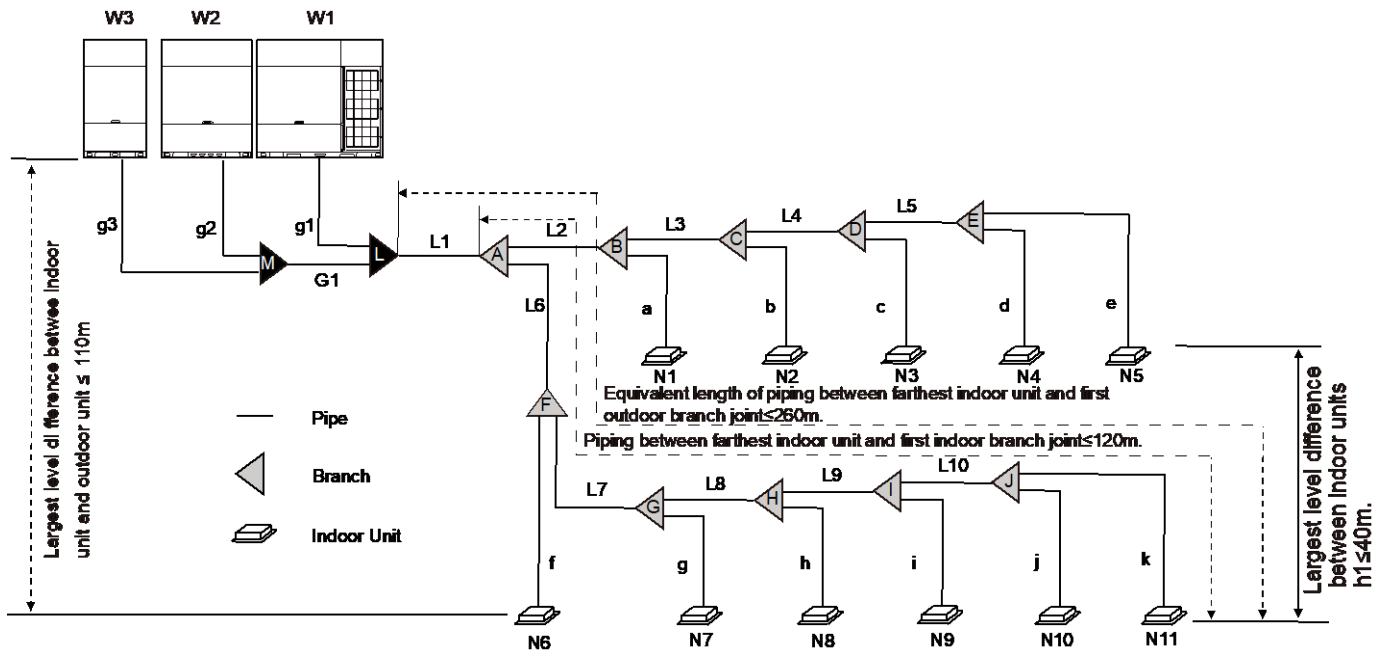
Pipe dimension D	Bend radius R	Hight H
Φ19.1	≥ 31	≥ 300
Φ22.2		
Φ25.4		
Φ28.6	≥ 45	≥ 300
Φ31.8		
Φ38.1	≥ 60	≥ 300
Φ41.3		
Φ44.5	≥ 80	≥ 500
Φ50.8		
Φ54.0	≥ 90	≥ 500
Φ63.5		

5. **Requirement 5:** The largest level difference between indoor units should not exceed 40m.

### 4.4 Selecting Piping Diameters

Tables 3-4.5 to 3-4.9, below, specify the required pipe diameters for the indoor and outdoor piping. The main pipe (L<sub>1</sub>) and first indoor branch joint (A) should be sized according to 3-4.5.

Figure 3-4.3: Selecting piping diameters



Legend		Figures in parentheses indicate indoor unit capacity indexes.
L <sub>1</sub>	Main pipe	
L <sub>2</sub> to L <sub>10</sub>	Indoor main pipes	
a to k	Indoor auxiliary pipes	
A to J	Indoor branch joints	
L, M	Outdoor branch joints	
g <sub>1</sub> to g <sub>3</sub> , G <sub>1</sub>	Outdoor connection pipes	

Table 3-4.5: Main pipe<sup>1</sup> (L<sub>1</sub>) and first indoor branch joint (A)

Total capacity of outdoor units	Equivalent length to the farthest IDU < 90m			Equivalent length to the farthest IDU ≥ 90m		
	Gas pipe (mm)	Liquid pipe (mm)	Branch joint kit	Gas pipe (mm)	Liquid pipe (mm)	Branch joint kit
8HP	Φ19.1	Φ9.52	FQZHN-01D	Φ22.2	Φ12.7	FQZHN-02D
10HP	Φ22.2	Φ9.52	FQZHN-02D	Φ25.4	Φ12.7	FQZHN-02D
12-14HP	Φ25.4	Φ12.7	FQZHN-02D	Φ28.6	Φ15.9	FQZHN-03D
16HP	Φ28.6	Φ12.7	FQZHN-03D	Φ31.8	Φ15.9	FQZHN-03D
18HP	Φ28.6	Φ15.9	FQZHN-03D	Φ31.8	Φ15.9	FQZHN-03D
20-24HP	Φ28.6	Φ15.9	FQZHN-03D	Φ31.8	Φ19.1	FQZHN-03D
26-34HP	Φ31.8	Φ19.1	FQZHN-03D	Φ38.1	Φ22.2	FQZHN-04D
36-54HP	Φ38.1	Φ19.1	FQZHN-04D	Φ41.3	Φ22.2	FQZHN-05D
56-66HP	Φ41.3	Φ19.1	FQZHN-05D	Φ44.5	Φ22.2	FQZHN-05D
68-82HP	Φ44.5	Φ22.2	FQZHN-05D	Φ50.8	Φ25.4	FQZHN-06D
84-88HP	Φ50.8	Φ25.4	FQZHN-06D	Φ54.0	Φ25.4	FQZHN-06D
90-92HP	Φ50.8	Φ25.4	FQZHN-06D	Φ54.0	Φ25.4	FQZHN-06D
94-96HP	Φ50.8	Φ25.4	FQZHN-06D	Φ54.0	Φ28.6	FQZHN-07D

Notes:

1. If the level difference is more than 50m (the outdoor unit is above) or 40m (the outdoor unit is below), the liquid pipe of the main pipe (L<sub>1</sub>) should be selected according to equivalent length to the farthest IDU ≥ 90m.

Table 3-4.6: Indoor main pipes (L<sub>2</sub> to L<sub>10</sub>) and indoor branch joint kits

Total capacity indexes of indoor units	Gas pipe (mm)	Liquid pipe (mm)	Branch joint kit
Capacity indexes < 168	Φ15.9	Φ9.52	FQZHN-01D
168 ≤ Capacity indexes < 224	Φ19.1	Φ9.52	FQZHN-01D
224 ≤ Capacity indexes < 330	Φ22.2	Φ9.52	FQZHN-02D
330 ≤ Capacity indexes < 470	Φ28.6	Φ12.7	FQZHN-03D
470 ≤ Capacity indexes < 710	Φ28.6	Φ15.9	FQZHN-03D
710 ≤ Capacity indexes < 1040	Φ31.8	Φ19.1	FQZHN-03D
1040 ≤ Capacity indexes < 1540	Φ38.1	Φ19.1	FQZHN-04D
1540 ≤ Capacity indexes < 1900	Φ41.3	Φ19.1	FQZHN-05D
1900 ≤ Capacity indexes < 2350	Φ44.5	Φ22.2	FQZHN-05D
2350 ≤ Capacity indexes < 500	Φ50.8	Φ22.2	FQZHN-06D
2500 ≤ Capacity indexes < 3024	Φ50.8	Φ25.4	FQZHN-06D
3024 ≤ Capacity indexes	Φ54.0	Φ28.6	FQZHN-07D

Notes:

- If indoor main pipes (L<sub>2</sub> to L<sub>10</sub>) are larger than the main pipe (L<sub>1</sub>), indoor main pipes should reduce to the main pipe's size.

Figure 3-4.4: Outdoor connection pipes

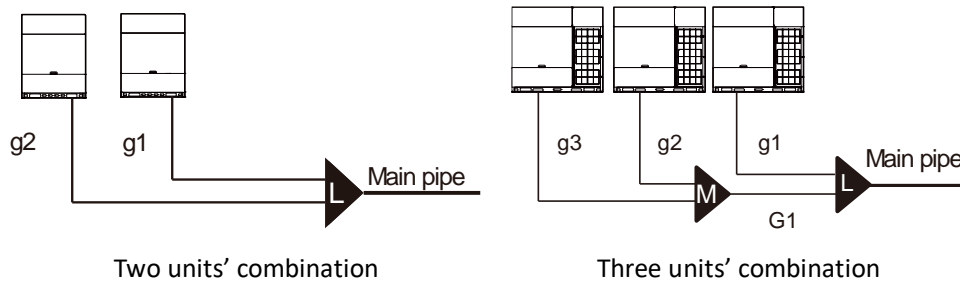


Table 3-4.7: Two units' combination outdoor connection pipes (g<sub>1</sub> to g<sub>2</sub>)

Pipes	Total outdoor unit capacity	Outdoor unit capacity	Gas pipe (mm)	Liquid pipe (mm)
g <sub>1</sub> to g <sub>2</sub>	< 56 HP	8-12HP	Φ25.4	Φ12.7
		14-24HP	Φ31.8	Φ15.9
		26-32HP	Φ38.1	Φ19.1
	≥ 56HP	20-24HP	Φ31.8	Φ15.9
		26-32HP	Φ38.1	Φ19.1

Table 3-4.8: Three units' combination outdoor connection pipes (g<sub>1</sub> to g<sub>3</sub>, G<sub>1</sub>)

Pipes	Total outdoor unit capacity	Outdoor unit capacity	Gas pipe (mm)	Liquid pipe (mm)
g <sub>1</sub> to g <sub>3</sub>	≤ 96HP	8-12HP	Φ25.4	Φ12.7
		14-24HP	Φ31.8	Φ15.9
		26-32HP	Φ38.1	Φ19.1
G <sub>1</sub>	≤ 96HP	/	Φ41.3	Φ22.2

*Table 3-4.9: Outdoor branch joint kits (L to M)*

No. of outdoor units	Outdoor unit capacity	Branch joint kit
2	< 56 HP	FQZHW-02N1E
	≥ 56HP	FQZHW-02N1G
3	≤96HP	FQZHW-03N1E

*Table 3-4.10: Indoor auxiliary pipes (a to k)*

Capacity of indoor unit (kW)	Gas pipe (mm)	Liquid pipe (mm)
Capacity ≤ 5.6	Φ12.7	Φ6.35
5.6 < Capacity ≤ 16	Φ15.9	Φ9.52

**Notes:**

1. The size of indoor side branch pipe shall not be larger than that of main pipe. If the size of main pipe selected according to the above table is larger than that of main pipe, the size of branch pipe shall be reduced to make it the same as that of main pipe.
2. If the indoor unit capacity exceeds the range in the table above, select the pipe diameter according to the manual of the indoor unit.

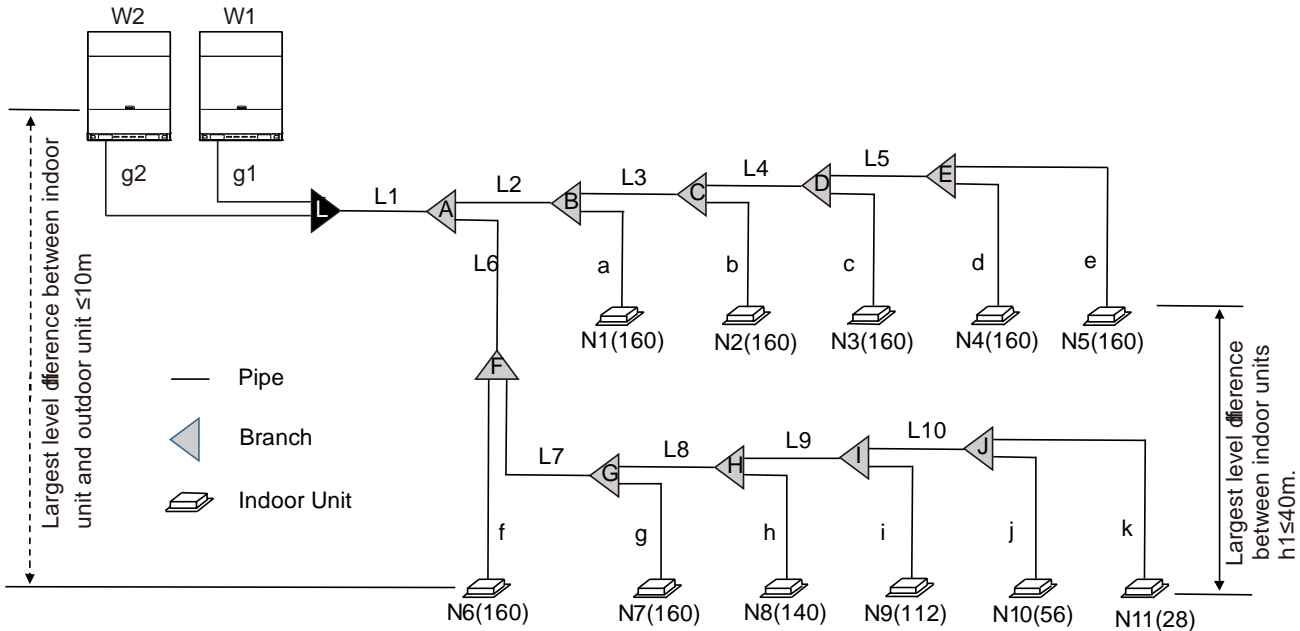
**If the required pipe size is not available, you can use other diameters by considering the following factors:**

1. If the standard size is not available in local market, a pipe that is one size larger should be used.
2. In some circumstances, the pipe size needs to be one size larger than the standard size; this is the “Size up Size” (for example: when the equivalent length of all the liquid piping is larger than 90m, the pipe size needs to be one size up; when the piping length from the farthest indoor unit to the first indoor unit is more than 40m, the indoor main pipe size needs to be one size up to allow a piping length of up to 120m). If the “Size up Size” is not available in the local market, the standard size pipe must be used.
3. Pipe sizes bigger than the corresponding “Size up Size” cannot be used under any circumstances.
4. Calculation for the additional refrigerant must be adjusted according to section 8 on the determination of the additional refrigerant volume.

4.5 Refrigerant Piping Selection Example

The example below illustrates the piping selection procedure for a system consisting of two outdoor units (32HP+20HP) and 11 indoor units. The system's equivalent length of all liquid pipes is less than 90m; the piping between the farthest indoor unit and the first indoor branch joint is less than 40m in length, and each indoor auxiliary pipe (from each indoor unit to its nearest branch joint) is less than 10m in length.

Figure 3-4.5: Refrigerant piping selection example



Step 1: Select indoor auxiliary pipes a to k

- The capacity of indoor units N<sub>1</sub> to N<sub>9</sub> are larger than 5.6kW. Refer to Table 3-4.10. Indoor auxiliary pipes a to i are Φ15.9 / Φ9.52.
- The capacity of indoor units N<sub>10</sub> and N<sub>11</sub> are equal or less than 5.6kW. Refer to Table 3-4.10. Indoor auxiliary pipes j and k are Φ12.7 / Φ6.35.

Step 2: Select indoor main pipes and indoor branch joints B to J

Refer to Table 3-4.6

- The indoor units (N<sub>4</sub> and N<sub>5</sub>) downstream of indoor branch E have a total capacity of 16 x 2=32kW. Indoor main pipe L<sub>5</sub> is Φ22.2 / Φ9.52. Indoor branch joint E is FQZHN-02D.
- The indoor units (N<sub>3</sub> to N<sub>5</sub>) downstream of indoor branch D have a total capacity of 16 x 3=48kW. Indoor main pipe L<sub>4</sub> is Φ28.6 / Φ15.9. Indoor branch joint D is FQZHN-03D.
- The indoor units (N<sub>2</sub> to N<sub>5</sub>) downstream of indoor branch C have a total capacity of 16 x 4=64kW. Indoor main pipe L<sub>3</sub> is Φ28.6 / Φ15.9. Indoor branch joint C is FQZHN-03D.
- The indoor units (N<sub>1</sub> to N<sub>5</sub>) downstream of indoor branch B have a total capacity of 16 x 5=80kW. Indoor main pipe L<sub>2</sub> is Φ31.8/Φ19.1. Indoor branch joint B is FQZHN-03D.
- The indoor units (N<sub>10</sub> and N<sub>11</sub>) downstream of indoor branch J have a total capacity of 5.6+2.8= 8.4 kW. Indoor main pipe L<sub>10</sub> is Φ15.9/Φ9.52. Indoor branch joint J is FQZHN-01D.
- The indoor units (N<sub>9</sub> to N<sub>11</sub>) downstream of indoor branch I have a total capacity of 8.4+11.2=19.6 kW. Indoor main pipe L<sub>9</sub> is Φ19.1/Φ9.52. Indoor branch joint I is FQZHN-01D.
- The indoor units (N<sub>8</sub> to N<sub>11</sub>) downstream of indoor branch H have a total capacity of 19.6+14=33.6 kW. Indoor main pipe L<sub>8</sub> is Φ28.6/Φ12.7. Indoor branch joint H is FQZHN-03D.
- The indoor units (N<sub>7</sub> to N<sub>11</sub>) downstream of indoor branch G have a total capacity of 33.6+16=49.6 kW. Indoor main pipe L<sub>7</sub> is Φ28.6/Φ15.9. Indoor branch joint G is FQZHN-03D.

Legend	
L <sub>1</sub>	Main pipe
L <sub>2</sub> to L <sub>10</sub>	Indoor main pipes
a to k	Indoor auxiliary pipes
A to J	Indoor branch joints
L	Outdoor branch joints
G <sub>1</sub> , g <sub>1</sub> , g <sub>2</sub>	Outdoor connection pipes
Figures in parentheses indicate indoor unit capacity indexes.	

- The indoor units (N6 to N11) downstream of indoor branch F have a total capacity of  $49.6+16=65.6$  kW. Indoor main pipe L6 is  $\Phi 28.6/\Phi 15.9$ . Indoor branch joint F is FQZHN-03D.

**Step 3: Select main pipe and indoor branch joint A**

- The indoor units (N1 to N11) downstream of indoor branch joint A have a total capacity of  $80+65.6 = 145.6$  kW. The system's equivalent length of all liquid pipes is less than 90m. The total capacity of the outdoor units is  $32 + 20= 52$ HP. Main pipe L1 is  $\Phi 38.1/\Phi 19.1$ . First Indoor branch A is FQZHN-04D. Refer to Table 3-4.5.

**Step 4: Select outdoor connection pipes and outdoor branch joints**

- There are two outdoor units in the system. The master unit is 32HP, the slave unit is 20HP. Outdoor connection pipes g1 is  $\Phi 38.1 / \Phi 19.1$ , g2 is  $\Phi 31.8 / \Phi 15.9$ . Refer to Table 3-4.7.
- There are two outdoor units in the system. Refer to Table 3-4.9. Outdoor branch joints L is FQZHW-02N1E.

**4.6 Branch Joints**

Branch joint design should take account of the following:

- U-shaped branch joints should be used – tee joints are not suitable. Branch joint dimensions are given in Tables 3-4.11 to 3-4.13.
- To avoid accumulation of oil in the outdoor units, outdoor branch joints should be installed horizontally and must not be higher than the outdoor unit refrigerant outlets. Refer to Figure 3-5.8 and Figure 3-5.9 in Part 3, 5.6 “Branch Joints”. Indoor branch joints may be installed either horizontally or vertically.
- To ensure even distribution of refrigerant, branch joints should not be installed within 500mm of a 90° bend, another branch joint or the straight section of piping leading to an indoor unit, with the minimum 500mm being measured from the point where the branch joint is connected to the piping, as shown in Figure 3-4.6.

Figure 3-4.6: Branch joint spacing and separation from bends (unit: mm)

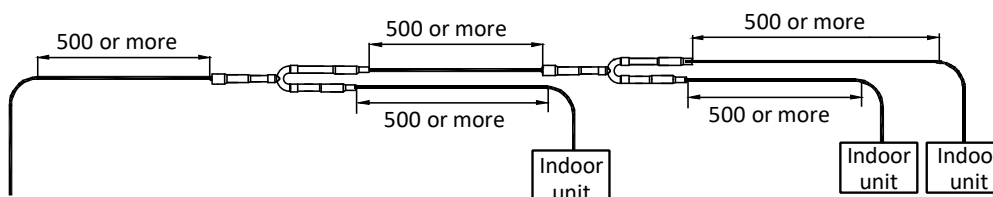


Table 3-4.11: Indoor branch joint dimensions (unit: mm)

Model	Gas side joints	Liquid side joints
FQZHN-01D		
FQZHN-02D		
FQZHN-03D		
FQZHN-04D		
FQZHN-05D		
FQZHN-06D		



Table 3-4.11: Indoor branch joint dimensions (unit: mm) (continued)

Model	Gas side joints	Liquid side joints
FQZHN-07D		

Table 3-4.12: Outdoor branch joint dimensions for 2 unit's combination (unit: mm)

Model	Gas side joints	Liquid side joints
FQZHW-02N1E		
FQZHW-02N1G		

Table 3-4.13: Outdoor branch joint dimensions for 3 unit's combination (unit: mm)

Model	Gas side joints	Liquid side joints
FQZHW-03N1E	<p>Gas side joints for FQZHW-03N1E model. Dimensions include ID:31.8, ID:38.1, ID:41.3, ID:44.5, ID:54.0, OD:31.8, OD:28.6, OD:38.1, OD:44.5, OD:54.0.</p>	<p>Liquid side joints for FQZHW-03N1E model. Dimensions include ID:15.9, ID:19.1, ID:22.2, ID:25.4, ID:28.6, OD:15.9, OD:12.7, OD:19.1, OD:25.4.</p>
FQZHW-03N1G	<p>Gas side joints for FQZHW-03N1G model. Dimensions include ID:31.8, ID:38.1, ID:41.2, ID:44.5, ID:54.0, ID:63.5, OD:31.8, OD:38.1, OD:44.5, OD:54.0.</p>	<p>Liquid side joints for FQZHW-03N1G model. Dimensions include ID:15.9, ID:19.1, ID:22.2, ID:25.4, ID:28.6, OD:15.9, OD:12.7, OD:19.1, OD:25.4.</p>

### 4.7 Refrigerant Leakage Precautions

R410A refrigerant is not flammable in air at temperatures up to 100°C at atmospheric pressure and is generally considered a safe substance to use in air conditioning systems. Nevertheless, precautions should be taken to avoid danger to life in the unlikely event of a major refrigerant leakage. Precautions should be taken in accordance with all applicable legislation. Where no applicable legislation exists, the following may be used as a guide:

- Air conditioned rooms should be large enough that if leakage of all the refrigerant in the system occurs, the concentration of the refrigerant in the room does not reach a level dangerous to health.
- A critical concentration (at which point R410A becomes dangerous to human health) of 0.44 kg/m<sup>3</sup> can be used.
- The potential concentration of refrigerant in a room following a leak can be calculated as follows:
  - Calculate the total amount in of refrigerant in the system (“A”) as the nameplate charge (the charge in the system when delivered from the factory) plus the additional charge added as per Part 3, 8.1 “Calculating Additional Refrigerant Charge”.
  - Calculate the total volume (“B”) of the smallest room into which refrigerant could potentially leak.
  - Calculate the potential refrigerant concentration as A divided by B.
  - If A/B is not less than 0.44 kg/m<sup>3</sup>, countermeasures such installing mechanical ventilators (either ventilating regularly or controlled by refrigerant leakage detectors) should be taken.
- Since R410A is heavier than air, particular consideration should be given to leak scenarios in basement rooms.

Figure 3-4.7: Potential refrigerant leak scenario

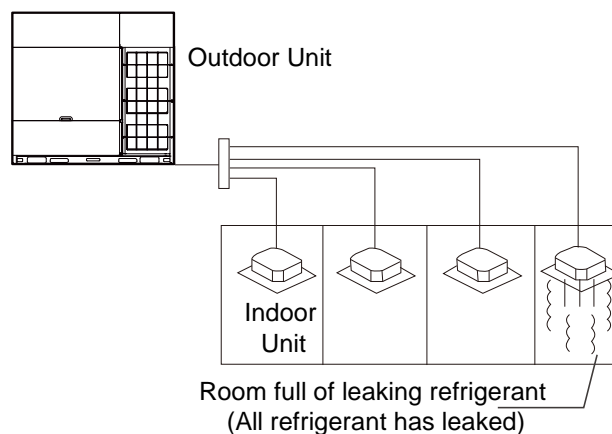
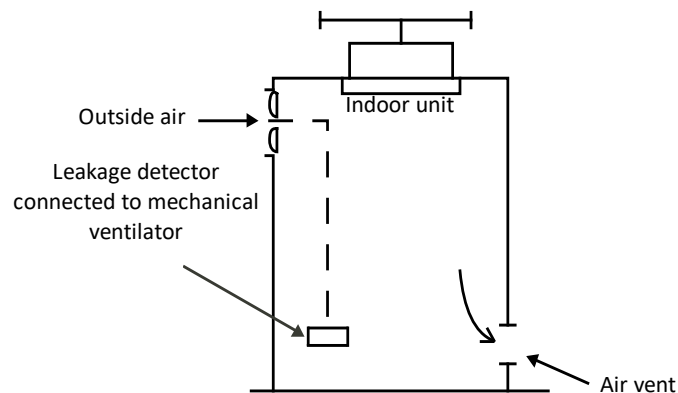


Figure 3-4.8: Mechanical ventilator controlled by refrigerant leak detector



## 5 Refrigerant Piping Installation

### 5.1 Procedure and Principles

#### 5.1.1 Installation procedure

Notes for installers

Installation of the refrigerant piping system should proceed in the following order:

Pipe insulation

Pipe brazing and installation

Pipe flushing

Gastightness test

Joint insulation

Vacuum drying

Note: Pipe flushing should be performed once the brazed connections have been completed with the exception of the final connections to the indoor units. That is, flushing should be performed once the outdoor units have been connected but before the indoor units are connected.

#### 5.1.2 Three principles for refrigerant piping

	Reasons	Measures
CLEAN	Particles such as oxide produced during brazing and/or building dust can lead to compressor malfunction	<ul style="list-style-type: none"> <li>Seal piping during storage<sup>1</sup></li> <li>Flow nitrogen during brazing<sup>2</sup></li> <li>Pipe flushing<sup>3</sup></li> </ul>
DRY	Moisture can lead to ice formation or oxidization of internal components leading to abnormal operation or compressor damage	<ul style="list-style-type: none"> <li>Pipe flushing<sup>3</sup></li> <li>Vacuum drying<sup>4</sup></li> </ul>
SEALED	Imperfect seals can lead to refrigerant leakage	<ul style="list-style-type: none"> <li>Pipe manipulation<sup>5</sup> and brazing<sup>2</sup> techniques</li> <li>Gastightness test<sup>6</sup></li> </ul>

- Notes:
1. See Part 3, 5.2.1 "Pipe delivery, storage and sealing".
  2. See Part 3, 5.5 "Brazing".
  3. See Part 3, 5.8 "Pipe Flushing".
  4. See Part 3, 5.10 "Vacuum Drying".
  5. See Part 3, 5.3 "Manipulating Copper Piping".
  6. See Part 3, 5.9 "Gastightness Test".

## 5.2 Storing Copper Piping

### 5.2.1 Pipe delivery, storage and sealing

#### Notes for installers



- Ensure that piping does not get bent or deformed during delivery or whilst stored.
- On construction sites store piping in a designated location.
- To prevent dust or moisture entering, piping should be kept sealed whilst in storage and until it is about to be connected. If piping is to be used soon, seal the openings with plugs or adhesive tape. If piping is to be stored for a long time, charge the piping with nitrogen at 0.2-0.5MPa and seal the openings by brazing.
- Storing piping directly on the ground risks dust or water ingress. Wooden supports can be used to raise piping off the ground.
- During installation, ensure that piping to be inserted through a hole in a wall is sealed to ensure dust and/or fragments of wall do not enter.
- Be sure to seal piping being installed outdoors (especially if being installed vertically) to prevent rain entering.

## 5.3 Manipulating Copper Piping

### 5.3.1 De-oiling

#### Notes for installers



- Lubrication oil used during some copper pipe manufacturing processes can cause deposits to form in R410A refrigerant systems, causing system errors. Oil-free copper piping should therefore be selected. If ordinary (oily) copper piping is used, it must be cleaned with gauze dipped in tetrachloroethylene solution prior to installation.

#### Caution

- Never use carbon tetrachloride (CCl<sub>4</sub>) for pipe cleansing or flushing, as doing so will seriously damage the system.

### 5.3.2 Cutting copper piping and removing burrs

#### Notes for installers



- Use a pipe cutter rather than a saw or cutting machine to cut piping. Rotate the piping evenly and slowly, applying even force to ensure that the piping does not become deformed during cutting. Using a saw or cutting machine to cut piping runs the risk of copper shavings entering the piping. Copper shavings are difficult to remove and pose a serious risk to the system if they enter the compressor or block the throttling unit.
- After cutting using a pipe cutter, use a reamer/scrapper to remove any burrs that have formed at the opening, keeping the opening of the piping downwards to avoid copper shavings from entering the piping.
- Remove burrs carefully to avoid scratches, which may prevent a proper seal being formed and lead to refrigerant leakage.

5.3.3 Expanding copper piping ends

Notes for installers

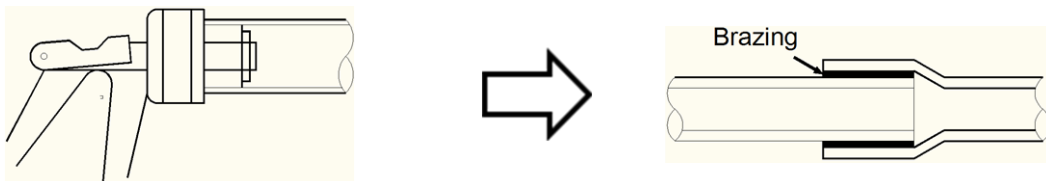


- Ends of copper piping can be expanded so that another length of piping can be inserted and the joint brazed.
- Insert the expanding head of the pipe expander into the pipe. After completing pipe expansion, rotate the copper pipe a few degrees to rectify the straight line mark left by the expanding head.

Caution

- Ensure that the expanded section of piping is smooth and even. Remove any burrs that remain after cutting.

Figure 3-5.1: Expanding copper piping ends



5.3.4 Flared joints

Flared joints should be used where a screw thread connection is required.

Notes for installers

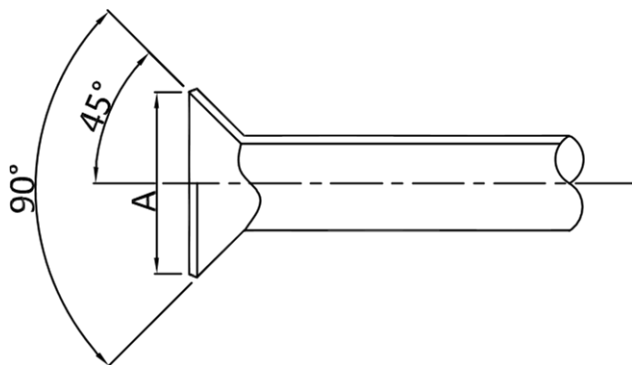


- Before flaring 1/2H (half hard) piping, anneal the end of the pipe to be flared.
- Remember to place the flare nut on the piping before flaring.
- Ensure the flared opening is not cracked, deformed or scratched, otherwise it will not form a good seal and refrigerant leakage may occur.
- The diameter of the flared opening should be within the ranges specified in Table 3-5.1. Refer to Figure 3-5.2.

Table 3-5.1: Flared opening size ranges

Pipe (mm)	Flared opening diameter (A) (mm)
Φ6.35	8.7 - 9.1
Φ9.52	12.8 - 13.2
Φ12.7	16.2 - 16.6
Φ15.9	19.3 - 19.7
Φ19.1	23.6 - 24.0

Figure 3-5.2: Flared opening



- When connecting a flared joint, apply some compressor oil to the inner and outer surfaces of the flared opening

5.3.5 Bending piping

Bending copper piping reduces the number of brazed joints required and can improve quality and save material.

Notes for installers



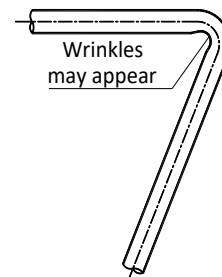
Piping bending methods

- Hand bending is suitable for thin copper piping ( $\Phi 6.35\text{mm} - \Phi 12.7\text{mm}$ ).
- Mechanical bending (using a bending spring, manual bending machine or powered bending machine) is suitable for a wide range of diameters ( $\Phi 6.35\text{mm} - \Phi 54.0\text{mm}$ ).

Caution

- When using a spring bender, ensure that the bender is clean before inserting it in the piping.
- After bending a copper pipe, ensure that there are no wrinkles or deformation on either side of the pipe.
- Ensure that bend angles do not exceed  $90^\circ$ , otherwise wrinkles may appear on the inner side of the pipe, and the pipe may buckle or crack. Refer to Figure 3-5.3.
- Do not use a pipe that has buckled during the bending process; ensure that the cross section at the bend is greater than  $2/3$  of the original area.

Figure 3-5.3: Pipe bending in excess of  $90^\circ$



5.4 Refrigerant Piping Supports

When the air conditioning is running, the refrigerant piping will deform (shrink, expand, droop). To avoid damage to piping, hangers or supports should be spaced as per the criteria in the Table 3-5.2. In general, the gas and liquid pipes should be suspended in parallel and the interval between support points should be selected according to the diameter of the gas pipe.

Table 3-5.2: Refrigerant piping support spacings

Pipe (mm)	Interval between support points (m)	
	Horizontal Piping	Vertical Piping
$< \Phi 20$	1	1.5
$\Phi 20 - \Phi 40$	1.5	2
$> \Phi 40$	2	2.5

Suitable insulation should be provided between the piping and the supports. If wooden dowels or blocks are to be used, use wood that has undergone preservative treatment.

Changes in refrigerant flow direction and refrigerant temperature result in movement, expansion and shrinkage of the refrigerant piping. Piping should therefore not be fixed too tightly, otherwise stress concentrations may occur in the piping, with the potential for rupturing.

5.5 Brazing

Care must be taken to prevent oxide forming on the inside of copper piping during brazing. The presence of oxide in a refrigerant system adversely affects the operation of valves and compressors, potentially leading to low efficiency or even compressor failure. To prevent oxidation, during brazing nitrogen should be flowed through the refrigerant piping.

Notes for installers



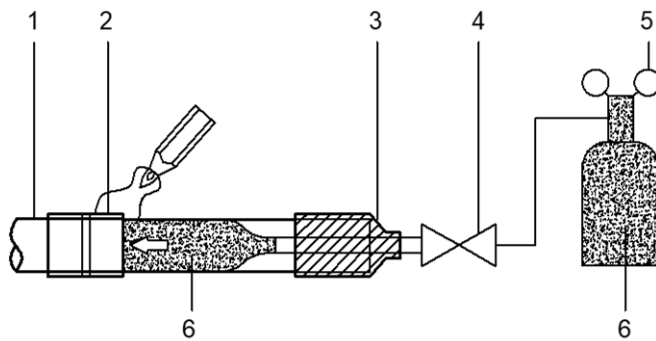
Warning

- Never flow oxygen through piping as doing so aids oxidation and could easily lead to explosion and as such is extremely dangerous.
- Take appropriate safety precautions such as having a fire extinguisher to hand whilst brazing.

Flowing nitrogen during brazing

- Use a pressure reducing valve to flow nitrogen through copper piping at 0.02-0.03MPa during brazing.
- Start the flow before brazing starts and ensure that the nitrogen continuously passes through the section being brazed until the brazing is complete and the copper has cooled down completely.

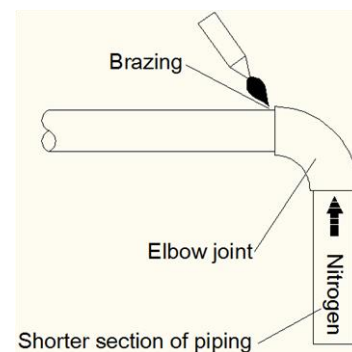
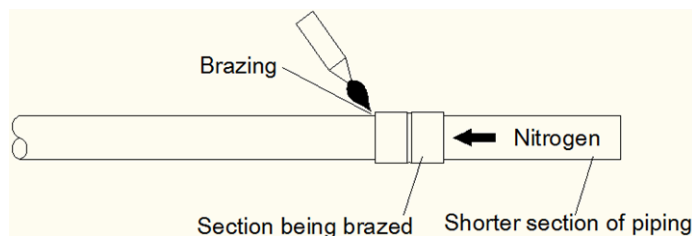
Figure 3-5.4: Flowing nitrogen through piping during brazing



Legend	
1	Copper piping
2	Section being brazed
3	Nitrogen connection
4	Hand valve
5	Pressure-reducing valve
6	Nitrogen

- When joining a shorter section of piping to a longer section, flow nitrogen from the shorter side to allow better displacement of air with nitrogen.
- If the distance from the point where nitrogen enters the piping to the joint to be brazed is long, ensure that the nitrogen is flowed for sufficient time to discharge all the air from the section to be brazed before commencing brazing.

Figure 3-5.5: Flowing nitrogen from shorter side during brazing



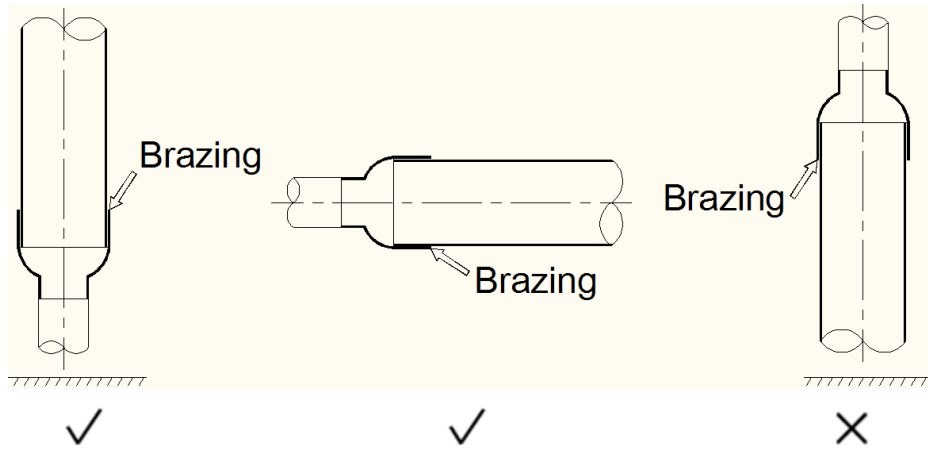
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**Piping orientation during brazing**

Brazing should be conducted downwards or horizontally to avoid filler leakage.

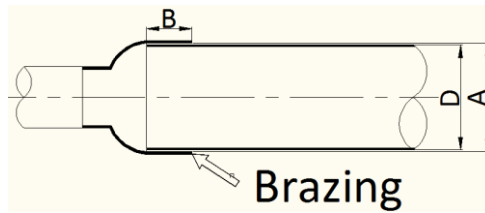
Figure 3-5.6: Piping orientation during brazing



**Piping overlap during brazing**

Table 3-5.3 specifies the minimum permissible piping overlap and the range of permissible gap sizes for brazed joints on piping of different diameters. Refer also to Figure 3-5.7.

Figure 3-5.7: Piping overlap and gap for brazed joints



Legend	
A	Inner diameter of larger pipe
D	Outer diameter of smaller pipe
B	Inlaid depth (overlap)

Table 3-5.3: Piping overlap and gap for brazed joints<sup>1</sup>

D (mm)	Minimum permissible B (mm)	Permissible A – D (mm)
5 < D < 8	6	0.05 - 0.21
8 < D < 12	7	
12 < D < 16	8	0.05 - 0.27
16 < D < 25	10	
25 < D < 35	12	0.05 - 0.35
35 < D < 45	14	

Notes:

1. A, B, D refer to the dimensions shown in Figure 3-5.7.

**Filler**

- Use a copper/phosphorus brazing alloy (BCuP) filler that does not require flux.
- Do not use flux. Flux can cause corrosion of piping and can affect the performance of compressor oil.
- Do not use anti-oxidants when brazing. Residue can clog piping and damage components.

5.6 Branch Joints

Notes for installers



- Use U-shaped branch joints as specified on the construction drawings – do not replace U-shaped branch joints with tee joints.
- To avoid accumulation of oil in the outdoor units, outdoor branch joints should be installed horizontally and must not be higher than the outdoor unit refrigerant outlets. Refer to Figure 3-5.9.
- Indoor branch joints may be installed either horizontally or vertically. Horizontal branch joints must be installed at an angle to the horizontal not exceeding 10° in order to avoid uneven distribution of refrigerant and possible malfunction. Refer to Figure 3-5.8.

Figure 3-5.8: Branch joint orientation

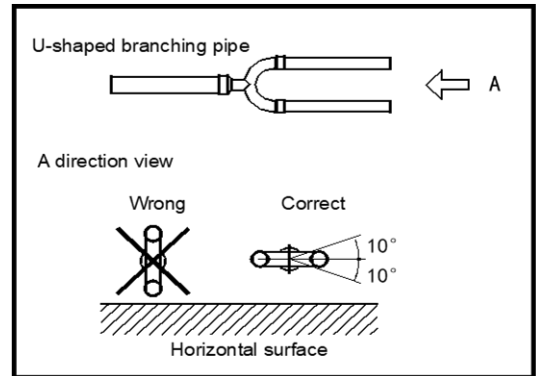
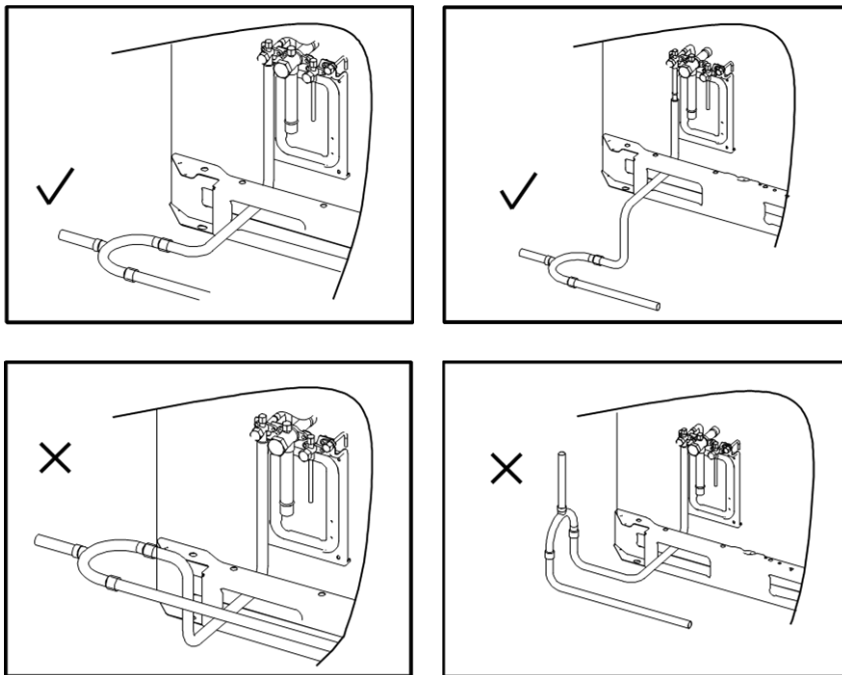
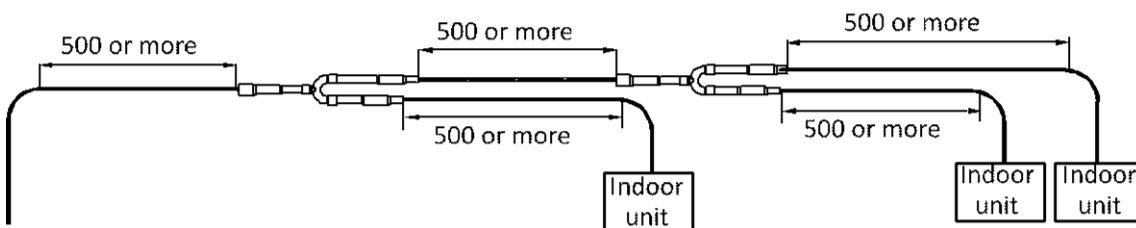


Figure 3-5.9: Installation of outdoor branch joints



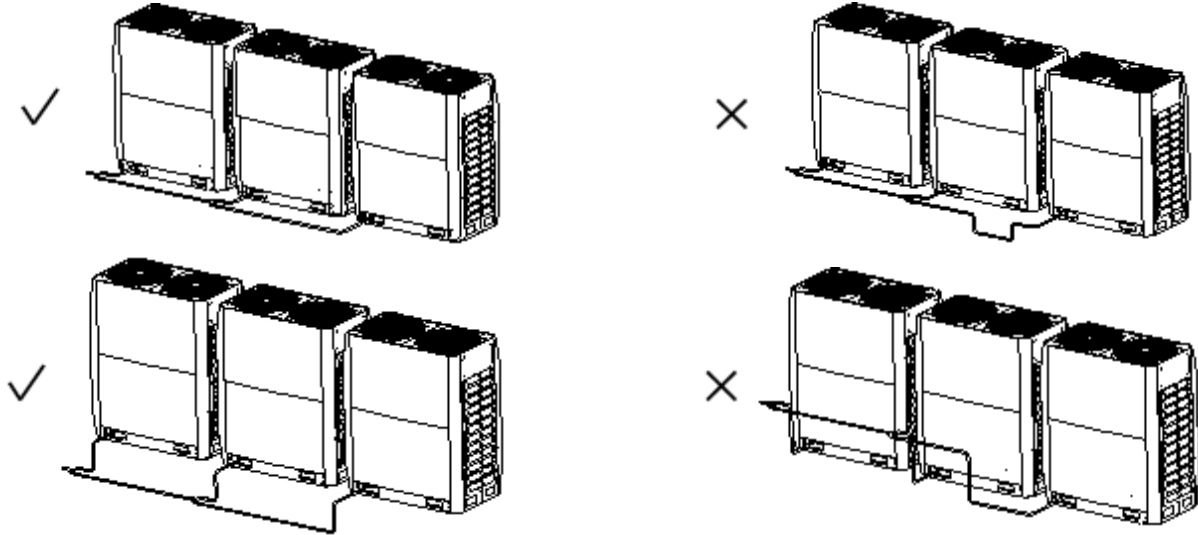
- To ensure even distribution of refrigerant, branch joints should not be installed within 500mm of a 90° bend, another branch joint or the straight section of piping leading to an indoor unit, with the minimum 500mm being measured from the point where the branch joint is connected to the piping, as shown below.



### 5.7 Piping Connections between Outdoor Units

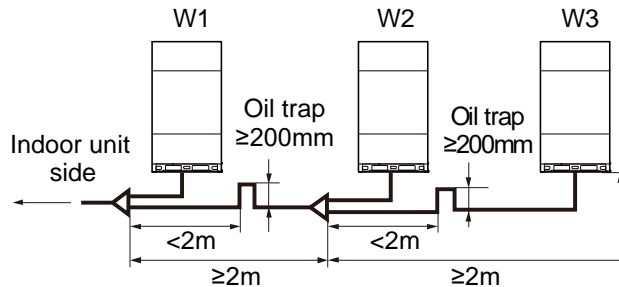
The piping connecting the outdoor units should be horizontal and must not be higher than the refrigerant outlets. If necessary, to avoid obstacles the piping may be vertically offset below the outlets. When inserting a vertical offset to avoid an obstacle, the whole outdoor piping should be offset, rather than just the section adjacent to the obstacle. Refer to Figure 3-5.10.

Figure 3-5.10: Piping connections between outdoor units



In case that the piping length between outdoor units is 2m or more, the oil trap for the gas pipe should be provided so that accumulation of refrigerant oil may not occur.

Figure 3-5.11: Oil trap between outdoor units



Outdoor piping should be installed in a metal casing to protect against exposure to sunlight, rain, wind and other potential causes of damage.

### 5.8 Pipe Flushing

#### 5.8.1 Purpose

To remove dust, other particles and moisture, which could cause compressor malfunction if not flushed out before the system is run, the refrigerant piping should be flushed using nitrogen. As described in Part 3, 5.1.1 "Installation procedure", pipe flushing should be performed once the piping connections have been completed with the exception of the final connections to the indoor units. That is, flushing should be performed once the outdoor units have been connected but before the indoor units are connected.

Notes for installers



**Warning**

Only use nitrogen for flushing. Using carbon dioxide risks leaving condensation in the piping. Oxygen, air, refrigerant, flammable gases and toxic gases must not be used for flushing. Use of such gases may result in fire or explosion.

**Procedure**

The liquid and gas sides can be flushed simultaneously; alternatively, one side can be flushed first and then Steps 1 to 8 repeated, for the other side. The flushing procedure is as follows:

1. Cover the inlets and outlets of the indoor units to prevent dirt getting blown in during pipe flushing. (Pipe flushing should be carried out before connecting the indoor units to the piping system.)
2. Attach a pressure reducing valve to a nitrogen cylinder.
3. Connect the pressure reducing valve outlet to the inlet on the liquid (or gas) side of the outdoor unit.
4. Use blind plugs to block all liquid (gas) side openings, except for the opening at the indoor unit which is furthest from the outdoor units ("Indoor unit A" in Figure 3-5.12).
5. Start to open the nitrogen cylinder valve and gradually increase the pressure to 0.5MPa.
6. Allow time for nitrogen to flow as far as the opening at indoor unit A.
7. Flush the first opening:
  - a) Using suitable material, such as a bag or cloth, press firmly against the opening at indoor unit A.
  - b) When the pressure becomes too high to block with your hand, suddenly remove your hand allowing gas to rush out.
  - c) Repeatedly flush in this manner until no further dirt or moisture is emitted from the piping. Use a clean cloth to check for dirt or moisture being emitted. Seal the opening once it has been flushed.
8. Flush the other openings in the same manner, working in sequence from indoor unit A towards the outdoor units. Refer to Figure 3-5.13.
9. Once flushing is complete, seal all openings to prevent dust and moisture from entering.

Figure 3-5.12: Pipe flushing using nitrogen

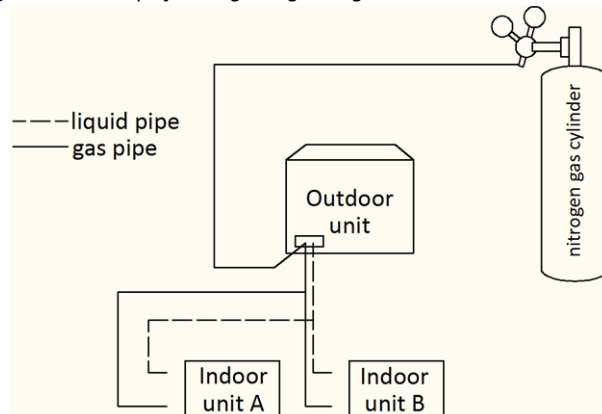
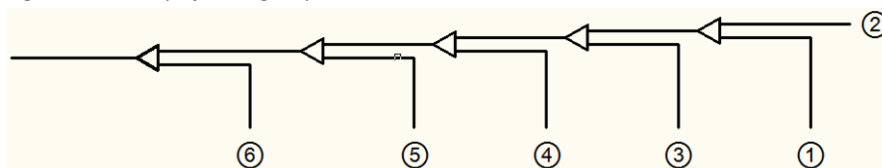


Figure 3-5.13: Pipe flushing sequence<sup>1</sup>



Notes:

1. 1-2-3-4-5-6 working towards the outdoor units.

## 5.9 Gastightness Test

### 5.9.1 Purpose

To prevent faults caused by refrigerant leakage, a gastightness test should be performed before system commissioning.

### 5.9.2 Procedure

#### Notes for installers



#### Warning

Only dry nitrogen should be used for gastightness testing. Oxygen, air, flammable gases and toxic gases must not be used for gastightness testing. Use of such gases may result in fire or explosion.

#### Procedure

The gastightness test procedure is as follows:

##### Step 1

- Once the piping system is complete and the indoor and outdoor units have been connected, vacuum the piping to -0.1MPa.

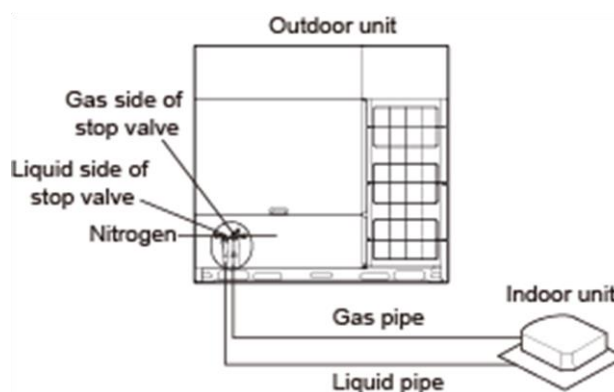
##### Step 2

- Charge the indoor piping with nitrogen at 0.3MPa through the needle valves on the liquid and gas stop valves and leave for at least 3 minutes (do not open the liquid or gas stop valves). Observe the pressure gauge to check for large leakages. If there is a large leakage, the pressure gauge will drop quickly.
- If there are no large leakages, charge the piping with nitrogen at 1.5MPa and leave for at least 3 minutes. Observe the pressure gauge to check for small leakages. If there is a small leakage, the pressure gauge will drop distinctly.
- If there are no small leakages, charge the piping with nitrogen at 4.2MPa and leave for at least 24 hours to check for micro leakages. Micro leakages are difficult to detect. To check for micro leakages, allow for any change in ambient temperature over the test period by adjusting the reference pressure by 0.01MPa per 1°C of temperature difference. Adjusted reference pressure = Pressure at pressurization + (temperature at observation – temperature at pressurization) x 0.01MPa. Compare the observed pressure with the adjusted reference pressure. If they are the same, the piping has passed the gastightness test. If the observed pressure is lower than the adjusted reference pressure, the piping has a micro leakage.
- If the leakage is detected, refer to Part 3, 5.9.3 “Leak detection”. Once the leak has been found and fixed, the gastightness test should be repeated.

##### Step 3

- If not continuing straight to vacuum drying (see Part 3, 5.10 “Vacuum Drying”) once the gastightness test is complete, reduce the system pressure to 0.5-0.8MPa and leave the system pressurized until ready to carry out the vacuum drying procedure.

Figure 3-5.14: Gastightness test



### 5.9.3 Leak detection

#### Notes for installers



The general methods for identifying the source of a leak are as follows:

1. Audio detection: relatively large leaks are audible.
2. Touch detection: place your hand at joints to feel for escaping gas.
3. Soapy water detection: small leaks can be detected by the formation of bubbles when soapy water is applied to a joint.
4. Refrigerant leak detection: for leaks that are difficult to detect, refrigerant leak detection may be used as follows:
  - a) Pressurize the piping with nitrogen at 0.3MPa.
  - b) Add refrigerant into the piping until the pressure reaches 0.5MPa.
  - c) Use a halogen refrigerant detector to find the leak.
  - d) If the leak source cannot be found, continuing charging with refrigerant to a pressure of 4MPa and then search again.

## 5.10 Vacuum Drying

### 5.10.1 Purpose

Vacuum drying should be performed in order to remove moisture and non-condensable gases from the system. Removing moisture prevents ice formation and oxidization of copper piping or other internal components. The presence of ice particles in the system would cause abnormal operation, whilst particles of oxidized copper can cause compressor damage. The presence of non-condensable gases in the system would lead to pressure fluctuations and poor heat exchange performance.

Vacuum drying also provides additional leak detection (in addition to the gastightness test).

**Notes for installers**


During vacuum drying, a vacuum pump is used to lower the pressure in the piping to the extent that any moisture present evaporates. At 5mmHg (755mmHg below typical atmospheric pressure) the boiling point of water is 0°C. Therefore a vacuum pump capable of maintaining a pressure of -756mmHg or lower should be used. Using a vacuum pump with a discharge in excess of 4L/s and a precision level of 0.02mmHg is recommended.

**Caution**

- Before performing vacuum drying, make sure that all the outdoor unit stop valves are firmly closed.
- Once the vacuum drying is complete and the vacuum pump is stopped, the low pressure in the piping could suck vacuum pump lubricant into the air conditioning system. The same could happen if the vacuum pump stops unexpectedly during the vacuum drying procedure. Mixing of pump lubricant with compressor oil could cause compressor malfunction and a one-way valve should therefore be used to prevent vacuum pump lubricant seeping into the piping system.

**Procedure**

The vacuum drying procedure is as follows:

**Step 1**

- Connect the blue (low pressure side) hose of a pressure gauge to the master unit gas pipe stop valve, the red (high pressure side) hose to the master unit liquid pipe stop valve and the yellow hose to the vacuum pump.

**Step 2**

- Start the vacuum pump and then open the pressure gauge valves to start vacuum the system.
- After 30 minutes, close the pressure gauge valves.
- After a further 5 to 10 minutes check the pressure gauge. If the gauge has returned to zero, check for leakages in the refrigerant piping.

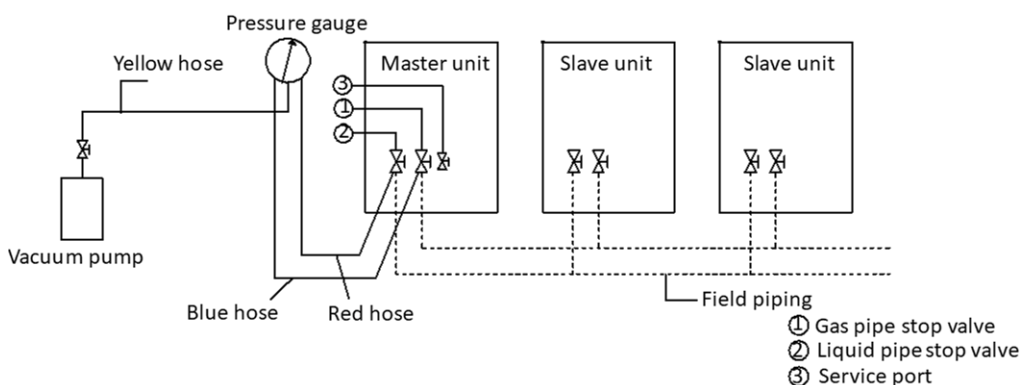
**Step 3**

- Re-open the pressure gauge valves and continue vacuum drying for at least 2 hours and until a pressure difference of 756mmHg or more has been achieved. Once the pressure difference of at least 756mmHg has been achieved, continue vacuum drying for 2 hours.

**Step 4**

- Close the pressure gauge valves and then stop the vacuum pump.
- After 1 hour, check the pressure gauge. If the pressure in the piping has not increased, the procedure is finished. If the pressure has increased, check for leakages.
- After vacuum drying, **keep the blue and red hoses connected to the pressure gauge and to the master unit stop valves**, in preparation for refrigerant charging (see Part 3, 8 “Charging Refrigerant”).

Figure 3-5.15: Vacuum drying



Pressure gauge

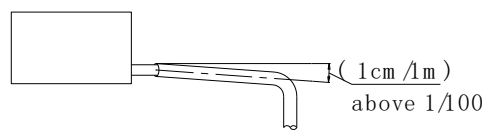
## 6 Drain Piping

### 6.1 Design Considerations

Drain piping design should take account of the following considerations:

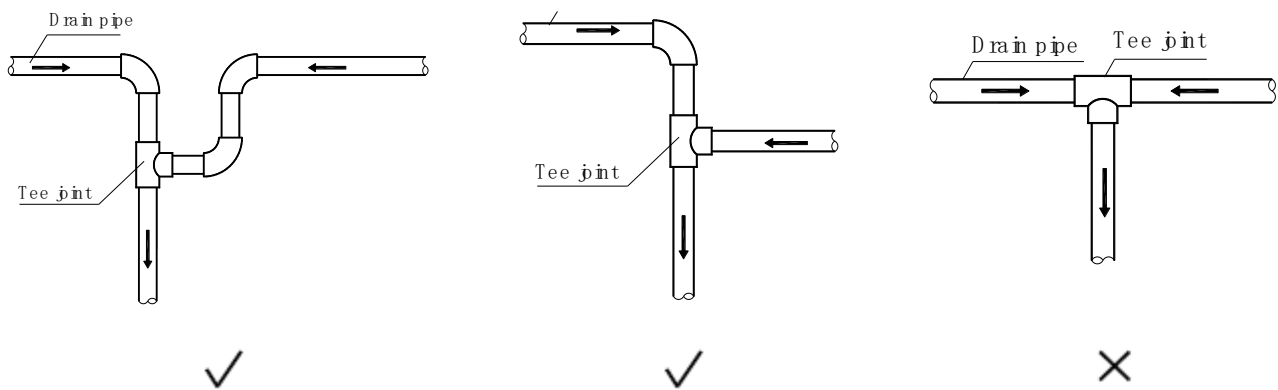
- Indoor unit condensate drain piping needs to be of sufficient diameter to carry the volume of condensate produced at the indoor units and installed at a slope sufficient to allow drainage. Discharge as close as possible to the indoor units is usually preferable.
- To prevent the drain piping becoming excessively long, consideration should be given to installing multiple drain piping systems, with each system having its own drainage point and providing drainage for a subset of the overall set of indoor units.
- The routing of drain piping should take into consideration the need to maintain sufficient slope for drainage whilst avoiding obstacles such as beams and ducting. The drain piping slope should be at least 1:100 away from indoor units. Refer to Figure 3-6.1.

Figure 3-6.1: Drain piping minimum slope requirement



- To avoid backflow and other potential complications, two horizontal drain pipes should not meet at the same level. Refer to the Figure 3-6.2 for suitable connection arrangements. Such arrangements also allow the slope of the two horizontal pipes to be selected independently.

Figure 3-6.2: Drain piping joints – correct and incorrect configurations



- Branch drain piping should join main drain piping from the top, as shown in Figure 3-6.3.
- Recommended support/hanger spacing is 0.8 – 1.0m for horizontal piping and 1.5 – 2.0m for vertical piping. Each vertical section should be fitted with at least two supports. For horizontal piping, spacing greater than those recommended leads to sagging and deformation of the pipe profile at the supports which impedes water flow and should therefore be avoided.
- Air vents should be fitted at the highest point of each drain piping system to ensure that condensation is discharged smoothly. U-bends or elbow joints should be used such that the vents face downwards, to prevent dust entering the piping. Refer to Figure 3-6.5. Air vents should not be installed too close to indoor unit lift pumps.

Figure 3-6.3: Branch drain piping joining main drain piping

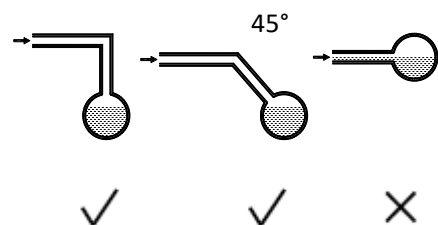


Figure 3-6.4: Effect of insufficient drain piping support

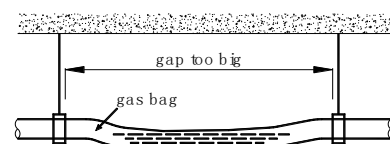
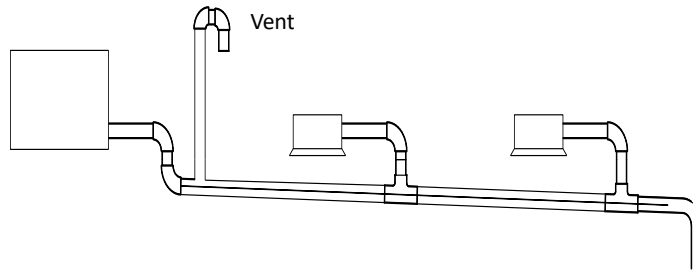




Figure 3-6.5: Drain piping air vents

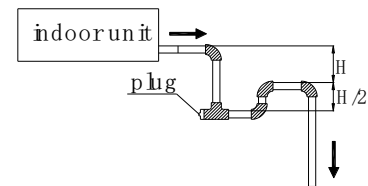


- Air conditioner drain piping should be installed separately from waste, rainwater and other drain piping and should not come into direct contact with the ground.
- Drain piping diameter should be not less than the indoor units’ drain piping connection.
- To allow inspection and maintenance, the piping clamps shipped with units should be used to attach drain piping to indoor units – adhesive should not be used.
- Thermal insulation should be added to drain piping to prevent condensation forming. Thermal insulation should extend all the way to the connection with the indoor unit.
- Units with drain pumps should have separate drain piping systems from systems that use natural drainage.

**6.2 Water Traps**

For indoor units with a high negative pressure differential at the outlet of the drainage pan, a trap should be fitted to the drain piping to prevent poor drainage and/or water being blown back into the drainage pan. Traps should be arranged as in Figure 3-6.6. The vertical separation H should be in excess of 50mm. A plug may be fitted to allow cleaning or inspection.

Figure 3-6.6: Drain piping water traps



**6.3 Selecting Piping Diameters**

Select branch drainage piping (the drain piping connection to each unit) diameters according to indoor unit flow volume and select main drainage piping diameters according to the combined flow volume of the upstream indoor units. Use a design assumption of 2 liters of condensate per horsepower per hour. For example, the combined flow volume of three 2HP units and two 1.5HP units would be calculated as follows:

$$\begin{aligned} \text{Combined flow volume} &= 3 \times 2 \text{ L/HP/h} \times 2\text{HP} + 2 \times 2 \text{ L/HP/h} \times 1.5\text{HP} = 18 \text{ L/h} \end{aligned}$$

Tables 3-6.1 and 3-6.2 specify the required piping diameters for horizontal and vertical branch piping and for main piping. Note that main piping should use PVC40 or larger.

Table 3-6.1: Horizontal drain piping diameters

PVC piping	Nominal diameter (mm)	Capacity (L/h)		Remarks
		Slope 1:50	Slope 1:100	
PVC25	25	39	27	Branch piping only
PVC32	32	70	50	
PVC40	40	125	88	Branch or main piping
PVC50	50	247	175	
PVC63	63	473	334	

Table 3-6.2: Vertical drain piping diameters

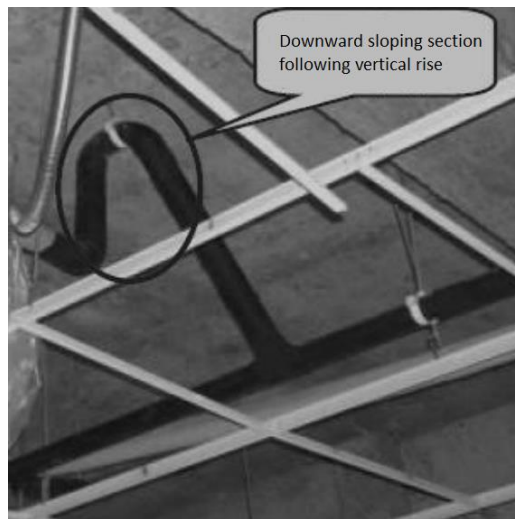
PVC piping	Nominal diameter (mm)	Capacity (L/h)	Remarks
PVC25	25	220	Branch piping only
PVC32	32	410	
PVC40	40	730	Branch or main piping
PVC50	50	1440	
PVC63	63	2760	
PVC75	75	5710	
PVC90	90	8280	

### 6.4 Drain Piping for Units with Lift Pumps

Drain piping for units with lift pumps should take account of the following additional considerations:

- A downward sloping section should immediately follow the vertically rising section adjacent to the unit, otherwise a water pump error will occur. Refer to Figure 3-6.7.
- Air vents should not be installed on vertically rising sections of drain piping, otherwise water may be discharged through the air vent or water flow may be impeded.

Figure 3-6.7: Downward sloping section of drain piping



### 6.5 Drain Piping Installation

#### Notes for installers



Installation of the drain piping should proceed in the following order:



#### Caution

- Ensure that all joints are firm and once the drain piping is all connected conduct a watertightness test and water flow test.
- Do not connect air conditioner drain piping to waste, rainwater or other drain piping and do not let air conditioner drain piping come into direct contact with the ground.
- For units with drain pumps, test that the drain pump functions properly by adding water to the unit’s drainage pan and running the unit. To allow inspection and maintenance, the pipe clamps shipped with units should be used to attach drain piping to indoor units – adhesive should not be used.

## 6.6 Watertightness Test and Water Flow Test

Once installation of a drainage piping system is complete, watertightness and water flow tests should be performed.

### Notes for installers



#### Watertightness test

- Fill the piping with water and test for leakages over a 24-hour period.

#### Water flow test (natural drainage test)

- Slowly fill the drainage pan of each indoor unit with at least 600ml of water through the inspection port and check that the water is discharged through the outlet of the drain piping.

#### Caution

- The drain plug in the drainage pan is for removing accumulated water prior to performing indoor unit maintenance. During normal operation, the drain should be plugged to prevent leakage.

## 7 Insulation

### 7.1 Refrigerant Piping Insulation

#### 7.1.1 Purpose

During operation, the temperature of the refrigerant piping varies. Insulation is required to ensure unit performance and compressor lifespan. During cooling, the gas pipe temperature can be very low. Insulation prevents condensation forming on the piping. During heating, the gas pipe temperature can rise to as high as 100°C. Insulation serves as necessary protection from burns.

#### 7.1.2 Selecting insulation materials

Refrigerant piping insulation should be closed-cell foam of B1 fire resistance rating that can withstand a constant temperature of over 120°C and that complies with all applicable legislation.

#### 7.1.3 Thickness of insulation

Minimum thicknesses for refrigerant piping insulation are specified in Table 3-7.1. In hot, humid environments, the thickness of insulation should be increased over and above the specifications in Table 3-7.1.

Table 3-7.1: Refrigerant piping insulation thickness

Pipe outer diameter (mm)	Minimum insulation thickness (mm) Humidity < 80%RH	Minimum insulation thickness (mm) Humidity ≥ 80%RH
Φ6.35	15	20
Φ9.52		
Φ12.7		
Φ15.9		
Φ19.1		
Φ22.2		
Φ25.4		
Φ28.6		
Φ31.8		
Φ38.1		
Φ41.3	20	25
Φ44.5		
Φ54.0		
Φ63.5		

### 7.1.4 Installation of piping insulation

With the exception of joint insulation, insulation should be applied to piping before fixing the piping in place. Insulation at joints in refrigerant piping should be applied after the gastightness test has been completed.

#### Notes for installers



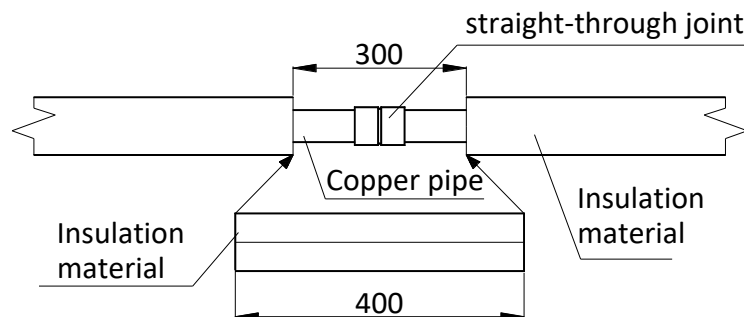
- Installation of insulation should be carried out in a manner suited to the type of insulation material being used.
- Ensure there are no gaps at the joints between sections of insulation.
- Do not apply tape too tightly as doing so may shrink insulation, reducing its insulating properties leading to condensation and loss of efficiency.
- Insulate gas and liquid pipes separately, otherwise heat exchange between the two sides will greatly impact efficiency.
- Do not bind the separately insulated gas and liquid pipes together too tightly as doing so can damage the joints between sections of insulation.

### 7.1.5 Installation of joint insulation

Insulation at joints in the refrigerant piping should be installed after the gastightness test has been successfully completed. The procedure at each joint is as follows:

1. Cut a section of insulation 50 to 100mm longer than the gap to be filled. Ensure that the cross-sectional and longitudinal openings are all cut evenly.
2. Embed the section into the gap ensuring that the ends abut tightly to the sections of insulation either side of the gap.
3. Glue the longitudinal cut and the joints with the sections of insulation either side of the gap.
4. Seal the seams with tape.

Figure 3-7.1: Installation of joint insulation (unit: mm)



### 7.2 Drain Piping Insulation

- Use rubber/plastic insulating tube with a B1 fire resistance rating.
- The insulation should typically be in excess of 10mm thick.
- For drain piping installed inside a wall, insulation is not required.
- Use suitable adhesive to seal seams and joints in the insulation and then bind with cloth reinforced tape of width not less than 50mm. Ensure tape is fixed firmly to avoid condensation.
- Ensure the drain piping insulation adjacent to the indoor unit drainage water outlet is fixed to the unit itself using adhesive, to prevent condensation and dripping.

### 7.3 Ducting Insulation

- Suitable insulation should be added to ducting in according with all applicable legislation.

## 8 Charging Refrigerant

### 8.1 Calculating Additional Refrigerant Charge

Total additional refrigerant charge amount (R) is equal to the sum of R1 and R2, calculate the amount of refrigerant to be charged according to the formula below:

$$R \text{ (kg)} = R1 + R2.$$

#### 8.1.1 Calculating the additional refrigerant charge calculation for liquid piping (R1 kg)

The additional refrigerant charge calculation for liquid piping depends on the lengths and diameters of the outdoor and indoor liquid pipes. Table 3-8.1 shows the additional refrigerant charge required per meter of equivalent pipe length for different diameters of pipe. The total additional refrigerant charge is obtained by summing the additional charge requirements for each of the outdoor and indoor liquid pipes, as in the following formula, where L<sub>1</sub> to L<sub>8</sub> represent the equivalent lengths of the pipes of different diameters. Assume 0.5m for the equivalent pipe length of each branch joint.

$$\begin{aligned} \text{Additional refrigerant charge R (kg)} &= L_1 (\Phi 6.35) \times 0.022 \\ &+ L_2 (\Phi 9.52) \times 0.057 \\ &+ L_3 (\Phi 12.7) \times 0.110 \\ &+ L_4 (\Phi 15.9) \times 0.170 \\ &+ L_5 (\Phi 19.1) \times 0.260 \\ &+ L_6 (\Phi 22.2) \times 0.360 \\ &+ L_7 (\Phi 25.4) \times 0.520 \\ &+ L_8 (\Phi 28.6) \times 0.680 \end{aligned}$$

Table 3-8.1: Additional refrigerant charge

Liquid side piping (mm)	Additional refrigerant charge per meter of equivalent length of piping (kg)
Φ6.35	0.022
Φ9.52	0.057
Φ12.7	0.110
Φ15.9	0.170
Φ19.1	0.260
Φ22.2	0.360
Φ25.4	0.520
Φ28.6	0.680

#### 8.1.2 Calculating the additional refrigerant charge quantity for outdoor unit (R2 kg)

The additional refrigerant charge quantity for outdoor unit depends on the capacity of connected outdoor units. In case of a combined system, add the sum of the each outdoor unit charge amount. Select the refrigerant quantity for each outdoor unit from the following table.

Table 3-8.2: Additional refrigerant charge quantity for outdoor unit (unit: kg)

HP	8HP	10HP	12HP	14HP	16HP	18HP	20HP	22HP	24HP	26HP	28HP	30HP	32HP
<b>Additional refrigerant Charge (kg)</b>	0	0	0	0	0	0	0	0	0	7	9	9	9

Strictly following the additional refrigerant charging amount calculation method, and determine that the additional amount shall not exceed the maximum refrigerant additional amount shown in table 3-8.3. If the additional refrigerant amount exceeds the limits, the total length of the pipeline construction scheme shall be shortened and the refrigerant charging amount shall be recalculated to meet the requirements.

Table 3-8.3: Maximum additional refrigerant charge amount (unit: kg)

Model	Maximum additional refrigerant	Model	Maximum additional refrigerant	Model	Maximum additional refrigerant
8HP	30.9	38HP	70.8	68HP	92.7
10HP	32.6	40HP	71.1	70HP	93.1
12HP	35.5	42HP	71.4	72HP	93.4
14HP	37.0	44HP	71.6	74HP	93.7
16HP	38.8	46HP	72.0	76HP	93.9
18HP	41.9	48HP	72.3	78HP	94.2
20HP	41.9	50HP	72.5	80HP	94.6
22HP	41.9	52HP	72.8	82HP	94.8
24HP	41.9	54HP	73.1	84HP	95.1
26HP	69.0	56HP	73.4	86HP	95.4
28HP	69.3	58HP	73.7	88HP	95.7
30HP	69.6	60HP	74.0	90HP	96.0
32HP	69.9	62HP	74.3	92HP	96.2
34HP	70.2	64HP	74.6	94HP	114.1
36HP	70.5	66HP	74.9	96HP	114.4

Notes:

1. The maximum addition refrigerant charge amount is based on the recommended combination.

**8.2 Adding Refrigerant**
**Notes for installers**

**Caution**

- Only charge refrigerant after performing a gastightness test and vacuum drying.
- Never charge more refrigerant than required as doing so can lead to liquid hammering.
- Only use refrigerant R410A - charging with an unsuitable substance may cause explosions or accidents.
- Use tools and equipment designed for use with R410A to ensure required pressure resistance and to prevent foreign materials from entering the system.
- Refrigerant must be treated in accordance with applicable legislation.
- Always use protective gloves and protect your eyes when charging refrigerant.
- Open refrigerant containers slowly.
- The power supply for all outdoor units should be turned on, when add refrigerant.

**Procedure**

The procedure for adding refrigerant is as follows:

**Step 1**

- Calculate additional refrigerant charge R (kg) (see Part 3, 8.1 “Calculating Additional Refrigerant Charge”)

**Step 2**

- Place a tank of R410A refrigerant on a weighing scale. Turn the tank upside down to ensure refrigerant is charged in a liquid state. (R410A is a blend of two different chemicals compounds. Charging gaseous R410A into the system could mean that the refrigerant charged is not of the correct composition).
- After vacuum drying (see Part 3, 5.10 “Vacuum Drying”), the blue and red pressure gauge hoses should still be connected to the pressure gauge and to the master unit stop valves.
- Connect the yellow hose from the pressure gauge to the R410A refrigerant tank.

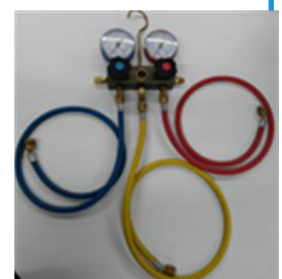
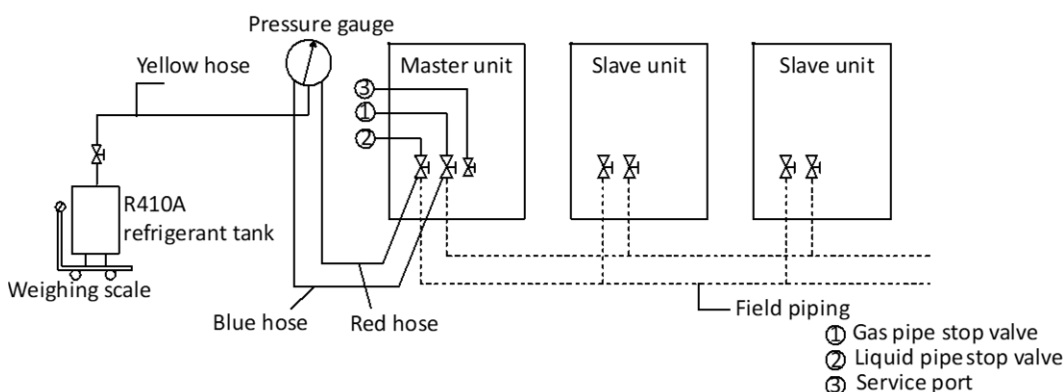
**Step 3**

- Open the valve where the yellow hose meets the pressure gauge, and open the refrigerant tank slightly to let the refrigerant eliminate the air. Caution: open the tank slowly to avoid freezing your hand.
- Set the weighing scale to zero.

**Step 4**

- Open the three valves on the pressure gauge to begin charging refrigerant.
- When the amount charged reaches R (kg), close the three valves. If the amount charged has not reached R (kg) but no additional refrigerant can be charged, close the three valves on the pressure gauge, run the outdoor units in cooling mode, and then open the yellow and blue valves. Continue charging until the full R (kg) of refrigerant has been charged, then close the yellow and blue valves. Note: Before running the system, be sure to complete all the pre-commissioning checks as listed in Part 3. “Pre-commissioning Checks” and be sure to open all stop valves as running the system with the stop valves closed would damage the compressor.

Figure 3-8.1: Charging refrigerant



Pressure gauge

## 9 Electrical Wiring

### 9.1 General

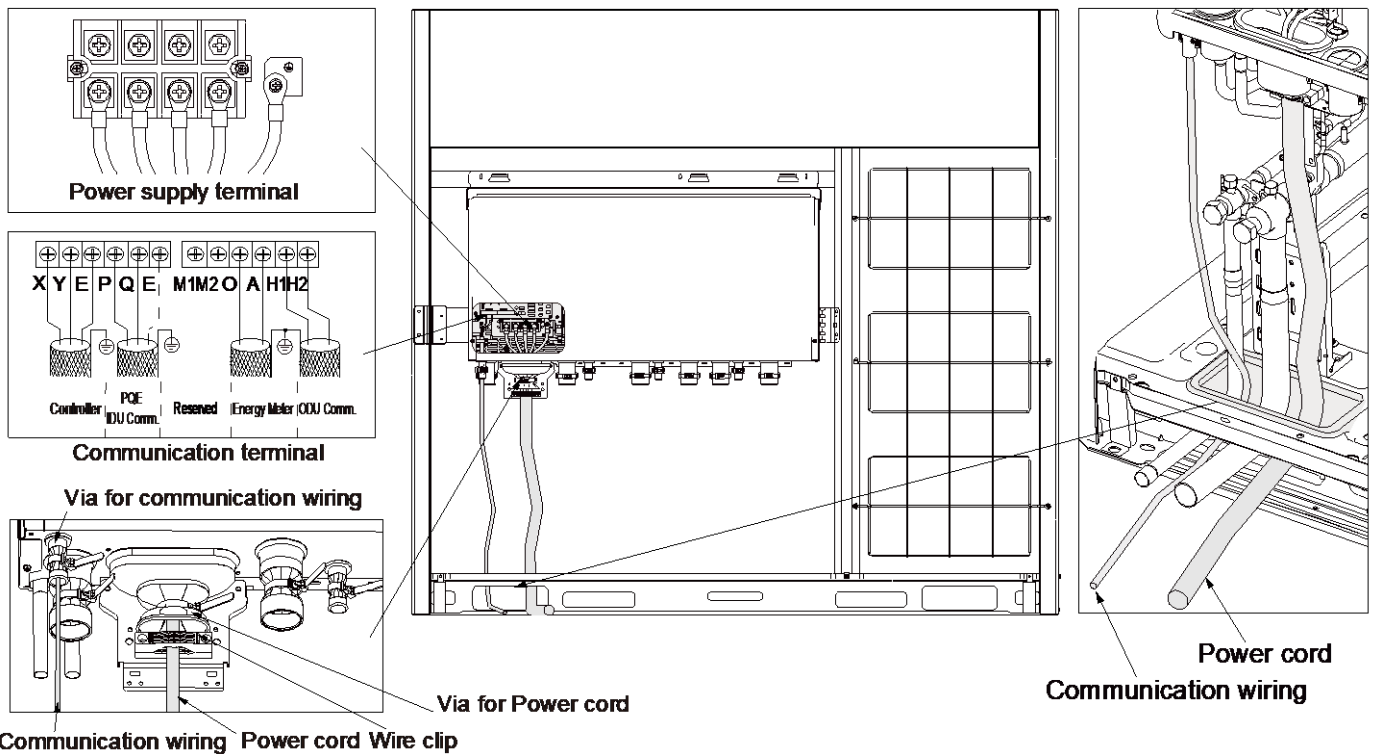
#### Notes for installers



#### Caution

- All installation and wiring must be carried out by competent and suitably qualified, certified and accredited professionals and in accordance with all applicable legislation.
- Use only wires with copper cores for the connections.
- Wiring must be carried out in strict accordance with what is stated in the product nameplate.
- Electrical systems should be grounded in accordance with all applicable legislation. Do not connect the earth wire to public pipes, telephone earth wires, surge absorbers and other places that are not designed for grounding. Improper grounding may cause electric shock.
- Overcurrent circuit breakers and residual-current circuit breakers (ground fault circuit interrupters) should be used in accordance with all applicable legislation.
- Wiring patterns shown in this data book are general connection guides only and are not intended for, or to include all details for, any specific installation.
- The refrigerant piping, power wiring and communication wiring are typically run in parallel. To prevent signal interference, the power wiring and communication wiring should not be run in the same conduit. If the power supply is less than 10A, a separation of at least 300mm between power wiring and communication wiring conduits should be maintained; if the power supply is in the range 10A to 50A then a separation of at least 500mm should be maintained.

Figure 3-9.1: Wiring layout





## 9.2 Power Supply Wiring

Power supply wiring design and installation should adhere to the following requirements:

- Separate power supplies should be provided for the indoor units and outdoor units.
- Where five or more outdoor units are installed, additional residual current protection (leakage protection) should be installed.
- All the indoor units in a system (i.e. all the indoor units connected to the same set of outdoor units) should be tied into the same power circuit with the same power supply, overcurrent and residual current protection (leakage protection) and manual switch, as shown in Figure 3-9.2. Do not install separate protectors or manual switches for each indoor unit. Powering on and shutting down all indoor units in a system should be done simultaneously. The reason for this is that if an indoor unit that is running were to suddenly power off whilst the other indoor units continued running, the evaporator of the powered-off unit would freeze since refrigerant would continue flowing to that unit (its expansion valve would still be open) but its fan would have stopped. The indoor units that remain running would not get sufficient refrigerant so their performance would suffer. Additionally, liquid refrigerant returning directly to the compressor from the powered-off unit would cause liquid hammering, potentially damaging the compressor.
- For outdoor unit power wire sizing and circuit breaker sizing, refer to Table 2-6.1 in Part 2, 6 “Electrical Characteristics”.

Figure 3-9.2: Outdoor unit power supply wiring

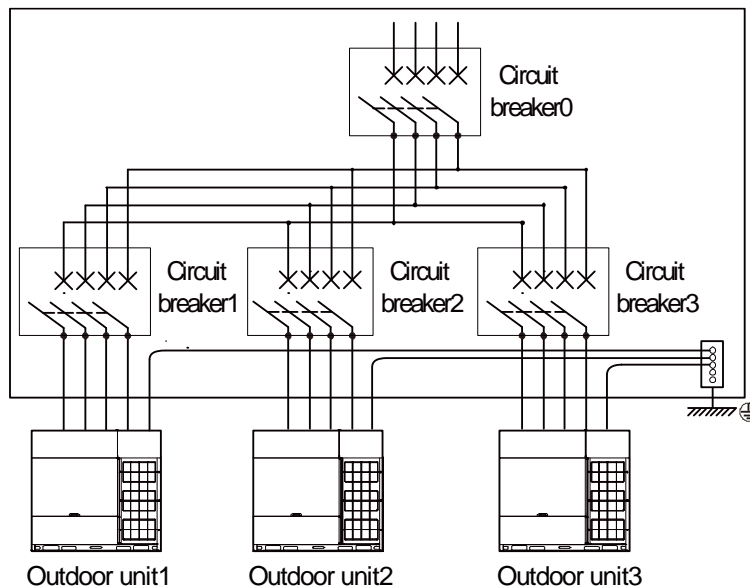
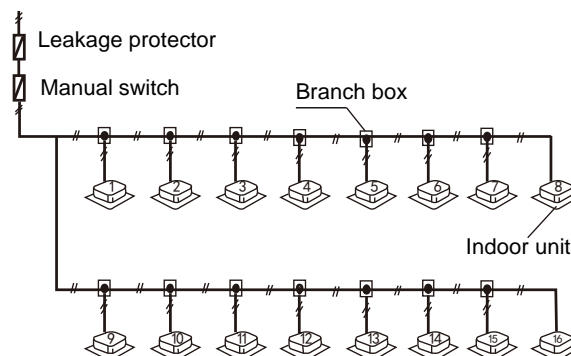


Figure 3-9.3: Indoor unit unified power supply wiring

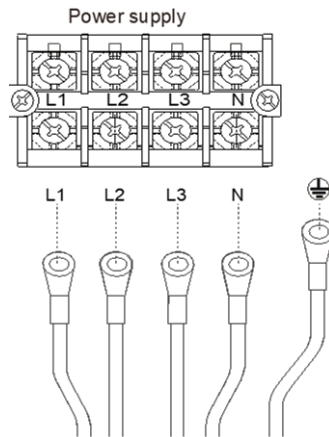


Notes for installers



The 380-415V, 3N~, 50Hz power supply should be connected to the outdoor unit power supply terminals as shown in Figure 3-9.4.

Figure 3-9.4: Outdoor unit 3-phase power supply terminals



9.3 Communication Wiring

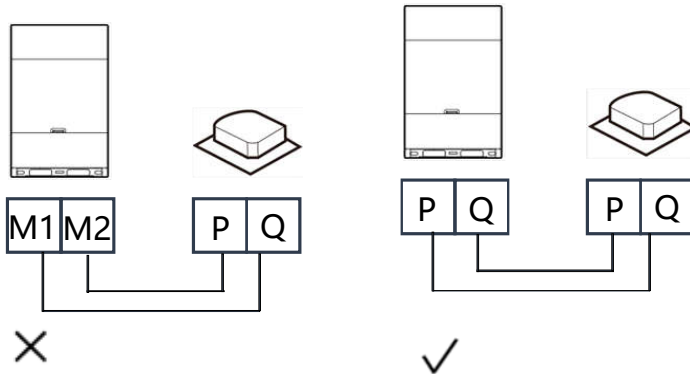
Communication wiring design and installation should adhere to the following requirements:

- Do not connect the communication line when the power is on.
- Connect the shielding nets at both ends of the shielded wire to the sheet metal “⊕” of the electronic control box.
- Do not connect the power cable to the terminal of communication line, otherwise, the motherboard will be damaged.
- On-site wiring must comply with the relevant regulations of the local Country/region and must be completed by professionals.
- The communication lines of the indoor and ODUs can only be connected from the master ODU.
- The communication lines between ODUs in combined system must be connected in a series.
- When a single communication line is not long enough, the joint must be crimped or soldered, and the copper wire at the joint shall not be exposed.
- Do not use the M1M2 port when connecting communication cables.
- MDV8 ECO outdoor unit compatible with different generation indoor units, the communication connection type should follow table 3-9.1.

Table 3-9.1: Communication connection between ODU and IDUs

Indoor unit generation	Communication connection type	Wire diameter (mm <sup>2</sup> )	Length limitation (m)
All 3 <sup>rd</sup> generation indoor unit	P Q	2x0.75	1200
Once there is 2 <sup>nd</sup> generation indoor unit in the system	P Q E	3x0.75	1200

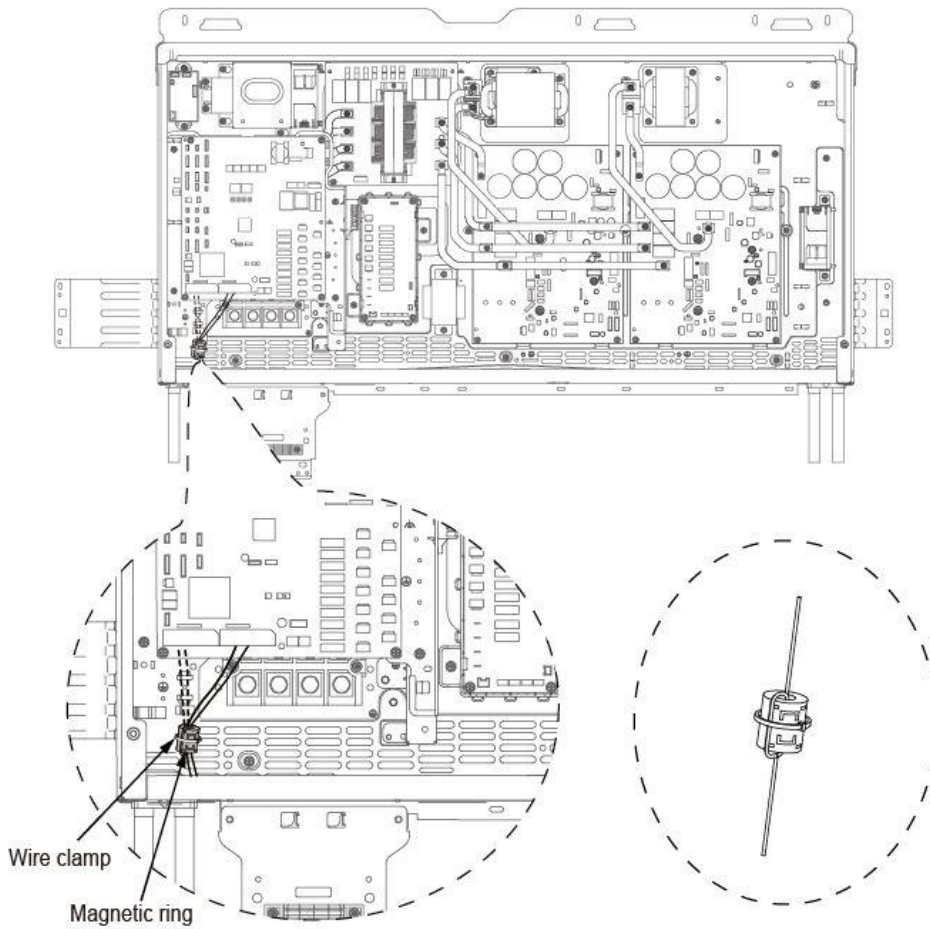
Figure 3-9.5: Communication wiring



### 9.3.1 The magnetic ring installation

For the system, the EMI effect of the communication line PQ (or PQE) can be improved by adding a magnetic ring. The installation is shown in the figure below. The magnetic ring needs to be fixed with the communication line (it can be wound for two turns), and placed in the electric control box and secured with a wire clamp.

Figure 3-9.6: The magnetic ring installation



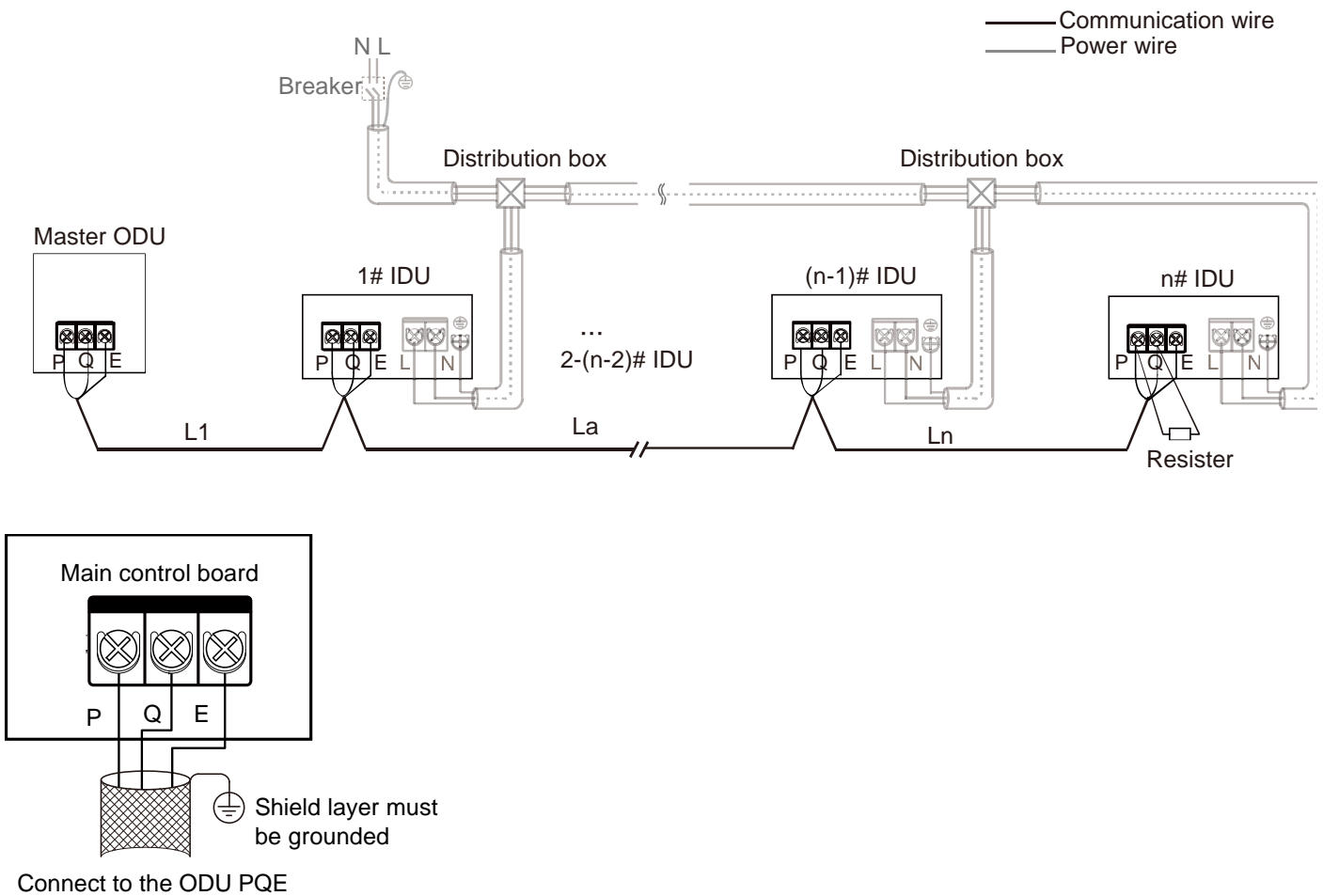
## 9.3.2 Outdoor unit and indoor units' P Q E communication

Communication wiring design and installation should adhere to the following requirements:

- 0.75mm<sup>2</sup> three-core shielded cable should be used for communication wiring. Using other types of cable can lead to interference and malfunction.
- Do not bind the communication line, refrigerant piping and power cable together.
- When the power cable and communication line are laid in parallel, the distance between the two lines must be 5cm or more to prevent signal source interference.
- The P Q E communication wires should be connected one unit after another in a daisy chain from the outdoor unit to the final indoor unit as shown in Figure 3-9.7. At the final indoor unit, a 120Ω resistor should be connected between the P and Q terminals. After the final indoor unit, the communication wiring should NOT be continued back to the outdoor unit – that is, do not attempt to form a closed loop.
- The P and Q communication wires should NOT be connecting to E.
- The shielding nets of the communication wires should be connected together and grounded. Grounding can be achieved by connecting to the metal casing adjacent to the P Q E terminals of the outdoor unit electrical control box.
- All IDUs in a system must be powered through a uniform power supply so that they can be powered on or off at the same time.
- The communication wiring (P, Q, E) must through the magnetic ring from the main board to the IDUs.

Figure 3-9.7: P Q E communication wiring configuration – IDUs uniform power supplied

- RS-485 (P Q E) communication wiring configuration  
L1+La+Ln≤1200m. Communication wiring 3\*0.75mm<sup>2</sup>



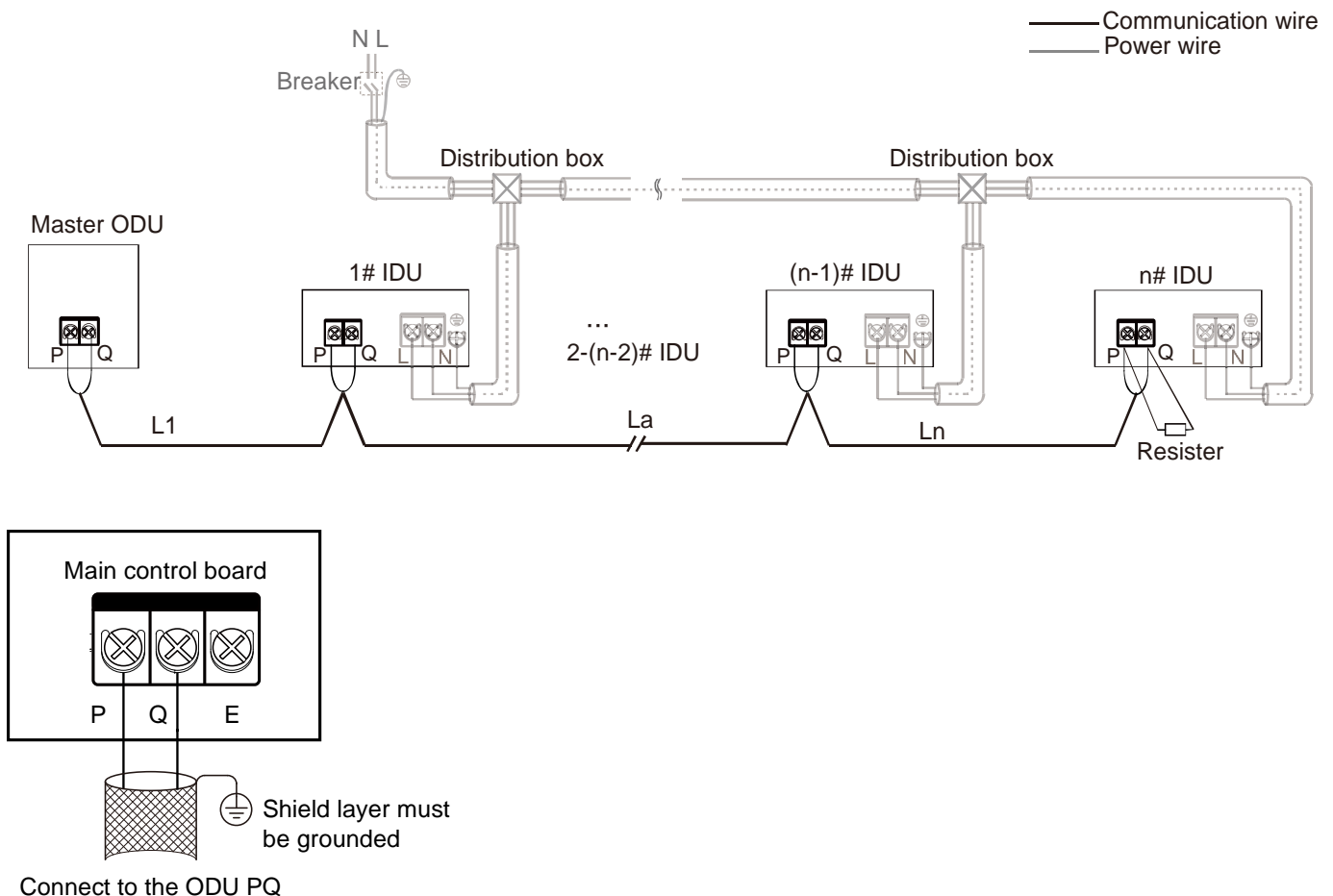
### 9.3.3 Outdoor unit and indoor units' P Q communication

Communication wiring design and installation should adhere to the following requirements:

- 0.75mm<sup>2</sup> two-core shielded cable should be used for communication wiring. Using other types of cable can lead to interference and malfunction.
- Do not bind the communication line, refrigerant piping and power cable together.
- The P Q communication wires should be connected one unit after another in a daisy chain from the outdoor unit to the final indoor unit as shown in Figure 3-9.8. At the final indoor unit, a 120Ω resistor should be connected between the P and Q terminals. After the final indoor unit, the communication wiring should NOT be continued back to the outdoor unit – that is, do not attempt to form a closed loop.
- The P and Q communication wires should NOT be connecting to E.
- The shielding nets of the communication wires should be connected together and grounded. Grounding can be achieved by connecting to the metal casing adjacent to the P Q E terminals of the outdoor unit electrical control box.
- All IDUs in a system must be powered through a uniform power supply so that they can be powered on or off at the same time

Figure 3-9.8: P Q communication wiring configuration – IDUs uniform power supplied

- RS-485 (P Q) communication wiring configuration  
 $L1+La+Ln \leq 1200m$ . Communication wiring  $2 \times 0.75mm^2$



Notes for installers



The communication wires should be connected to the master outdoor unit terminals indicated in Figure 3-9.11 and Table 3-9.2.

**Caution**

- Communication wiring has polarity. Care should be taken to connect the poles correctly.

Figure 3-9.11: Master outdoor unit communication terminals

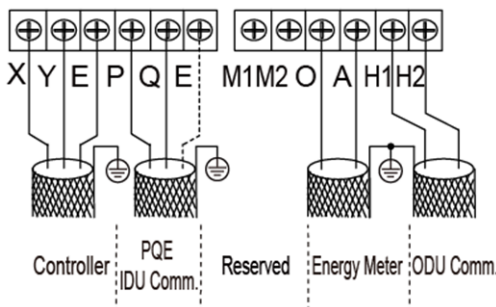


Table 3-9.2: Communication connections

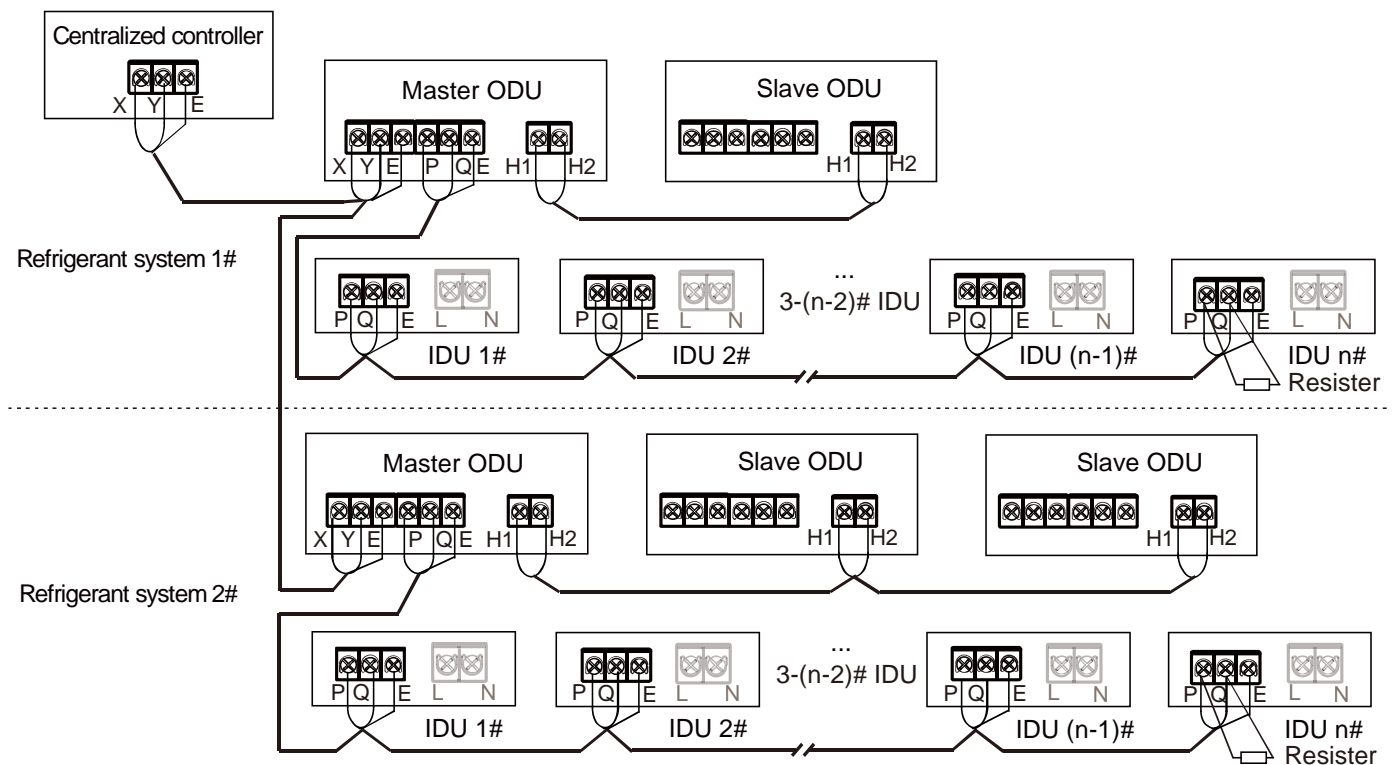
Terminals	Connection
X Y E	Connect to centralized controller
P Q E	Communication connection between indoor units and master outdoor unit
M1 M2	Reserved
O A	Connect to digital energy meter
H1 H2	Connect between outdoor units

**9.3.4 Outdoor units' H1 H2 and XYE communication**

The outdoor unit's combined system, and the communication lines between the ODUs must be connected in series.

- The H1 H2 communication wires should be connected one unit after another in a daisy chain from the master outdoor unit to the final slave outdoor unit. The XYE communication lines of the outdoor unit should be connected from the master unit.
- 0.75mm<sup>2</sup> two-core shielded cable should be used for communication wiring, and the length must not exceed 1200m.
- Connect the shielding nets at both ends of the shielded wire to the sheet metal "⊖" of the electronic control box.

Figure 3-9.12: Outdoor units' communication



## 10 Installation in Areas of High Salinity

### 10.1 Caution

Do not install outdoor units where they could be directly exposed to sea air. Corrosion, particularly on the condenser and evaporator fins, could cause product malfunction or inefficient performance.

Outdoor units installed in seaside locations should be placed such as to avoid direct exposure to the sea air and additional anticorrosion treatment options should be selected, otherwise the service life of the outdoor units will be seriously affected.

Air conditioning installed in seaside locations should be run regularly as the running of the outdoor unit fans helps prevent build-up of salt on the outdoor unit heat exchangers.

### 10.2 Placement and Installation

Outdoor units should be installed 300m or more from the sea. If possible, well-ventilated indoor locations should be chosen. (When installing outdoor units indoors, outdoor unit discharge ducts should be added. See Part 3, 3 “Outdoor Unit Ducting and Shielding”.) Refer to Figure 3-10.1. If it is necessary to install outdoor units outside, direct exposure to the sea air should be avoided. A canopy should be added to shield the units from sea air and rain, as shown in Figure 3-10.2.

Ensure that base structures drain well so that outdoor unit footings do not become waterlogged. Check that outdoor unit casing drainage holes are not blocked.

Figure 3-10.1: Installation in a well-ventilated indoor area

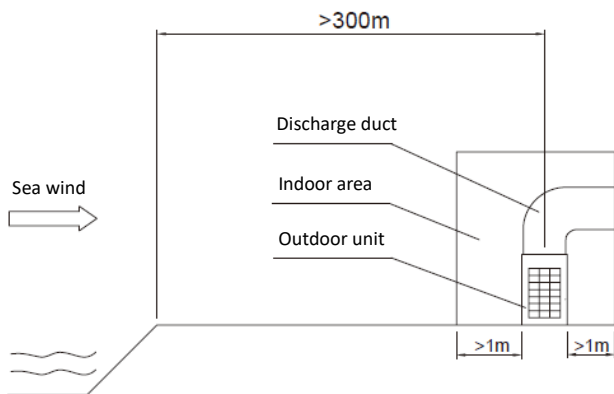
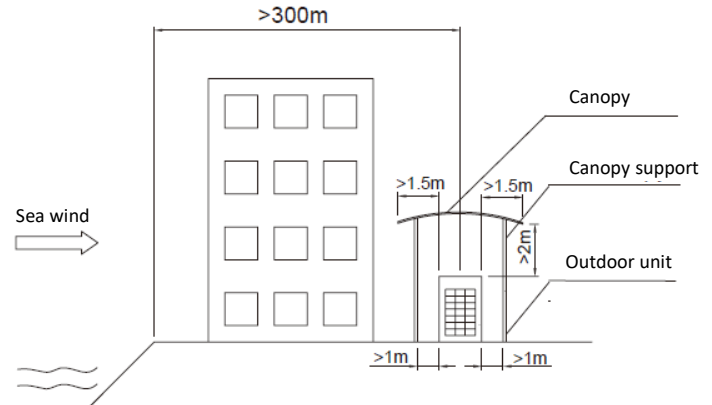


Figure 3-10.2: Installation outdoors under a canopy



### 10.3 Inspection and maintenance

In addition to standard outdoor unit servicing and maintenance, the following additional inspections and maintenance should be undertaken for outdoor units installed in seaside locations:

- A comprehensive post-installation inspection should check for any scratches or other damage to painted surfaces and any damaged areas should be repainted/repaired immediately.
- The units should be regularly cleaned using (non-salty) water to remove any salt that has accumulated. Areas cleaned should include the condenser, the refrigerant piping system, the outside surface of the unit casing and the outside surface of the electric control box.
- Regular inspections should check for corrosion and if necessary corroded components should be replaced and/or anti-corrosion treatments should be added.

## 11 Commissioning

### 11.1 Pre-commissioning Checks

Before turning on the power to the indoor and outdoor units, ensure the following:

- **Installation**

Check if the unit is installed correctly to prevent strange noises and vibrations when the unit starts.

- **Field wiring**

Based on the wiring schematic and the relevant regulations, make sure the field wiring is based on the instructions described in Part 3, "9" Electrical Wiring" on connecting wires.

- **Earth line**

Make sure the earth line is connected correctly, and the grounding terminal is tight.

- **Insulation test of main circuit**

Use the multimeter of 500V, apply a voltage of 500V DC between the power terminal and the earth terminal. Check that the insulation resistance is above 2 M $\Omega$ . Do not use the multimeter on the transmission line.

- **Fuses, circuit breakers, or protection devices**

Check that the fuses, circuit breakers, or locally installed protection devices comply with the size and type specified in Part 2, "7 Functional Components and Safety Devices". Make sure you use fuses and protection devices.

- **Internal wiring**

Visually inspect if the connections between the electrical component box and the interior of the unit is loose, or if the electrical components are damaged.

- **Piping dimensions and insulation**

Make sure the installation piping dimensions are correct, and the insulation work can be carried out normally.

- **Stop valve**

Make sure the stop valve is open on both the liquid, low pressure and high pressure gas sides.

- **Equipment damage**

Check for damaged components and extruded piping inside the unit.

- **Refrigerant leak**

Check for refrigerant leaks inside the unit. If there is a refrigerant leak, try to repair the leak. If the repair is not successful, please call the local agent. Do not come in contact with the refrigerant leaking from the refrigerant piping connections. It may cause frostbite.

- **Oil leak**

Check if there is oil leaking from the compressor. If there is an oil leak, try to repair the leak. If the repair is not successful, please call the local agent.

- **Air inlet/outlet**

Check for paper, cardboard or any other material that may obstruct the air inlet and outlet of the equipment.

- **Add additional refrigerant**

The amount of refrigerant to be added to this unit should be marked on the "Confirmation Table" which is placed at electrical control box front cover.

- **Installation date and field settings**

Make sure the installation date is recorded on the label of the electric control box cover, and the field settings are recorded as well.



## 11.2 Outdoor Unit Address and Communication Type Setting

### Step 1: Power on

Cover the lower panel of the ODU, and power on all IDUs and ODUs.

### Step 2: Enter commissioning mode

When the ODU is first powered on, it displays "-. -. -. .", which means the unit is not commissioned. Long press the "DOWN" and "UP" buttons simultaneously for 5s on the master ODU to enter commissioning mode.

### Step 3: Set the number of IDUs in a system

The digital display of the master ODU displays "01 01", where 1st and 2nd digits always on, 3rd and 4th digits flashing. The 3rd and 4th digits represent the number of IDUs, the initial value is 1, short press the "DOWN" or "UP" button to change the number. Once the number of IDUs has been set, short press the "OK" button to confirm and automatically proceed to the next step.

### Step 4: Select the system communication protocol

Enter the communication protocol setting interface, the digital display of master ODU displays "02 0", where the 1st and 2nd digits always on, the 3rd digit off, the 4th digit flashing. The 4th digit of the digital display represents the communication protocol type, the initial value is 0. Short press the "DOWN" or "UP" button to change the communication protocol.

If the system is **all 3rd generation IDUs**, and the IDUs and ODUs are connected by **PQ** communication, please select V8 protocol RS-485 (P Q) communication, and set the 4th digit of the master ODU digital display to **0**; ODU factory default V8 protocol RS-485 (P Q) communication.

If the system has a **non-3rd generation IDUs**, and the IDUs and ODUs are connected by **PQE** communication, please select the non-V8 protocol RS-485 (P Q E) communication and set the 4th digit of the master ODU digital display to **1**.

Once the communication protocol has been set, short press the "OK" button to confirm and automatically proceed to the next step.

### Step 5: IDUs and ODUs address setting

Enter the auto addressing function, the digital display of master ODU flashes "AU Ad" and "X YZ" in rotation. "AU Ad" means the auto addressing is in progress, "X" represents the address of the ODU, "YZ" represents the number of detected IDUs; the auto addressing takes about 5-7 minutes, and automatically proceed to the next step after completion.

### Step 6: System initialization

Entering system initialization, the digital display of master ODU flashes "AU Ad" and "X YZ" in rotation. "INIt" means initialization is in progress, "X" represents the address of the ODU, "YZ" represents the number of detected IDUs; the system initialization takes about 3-5 minutes, and automatically proceed to the next step after completion.

### Step 7: End

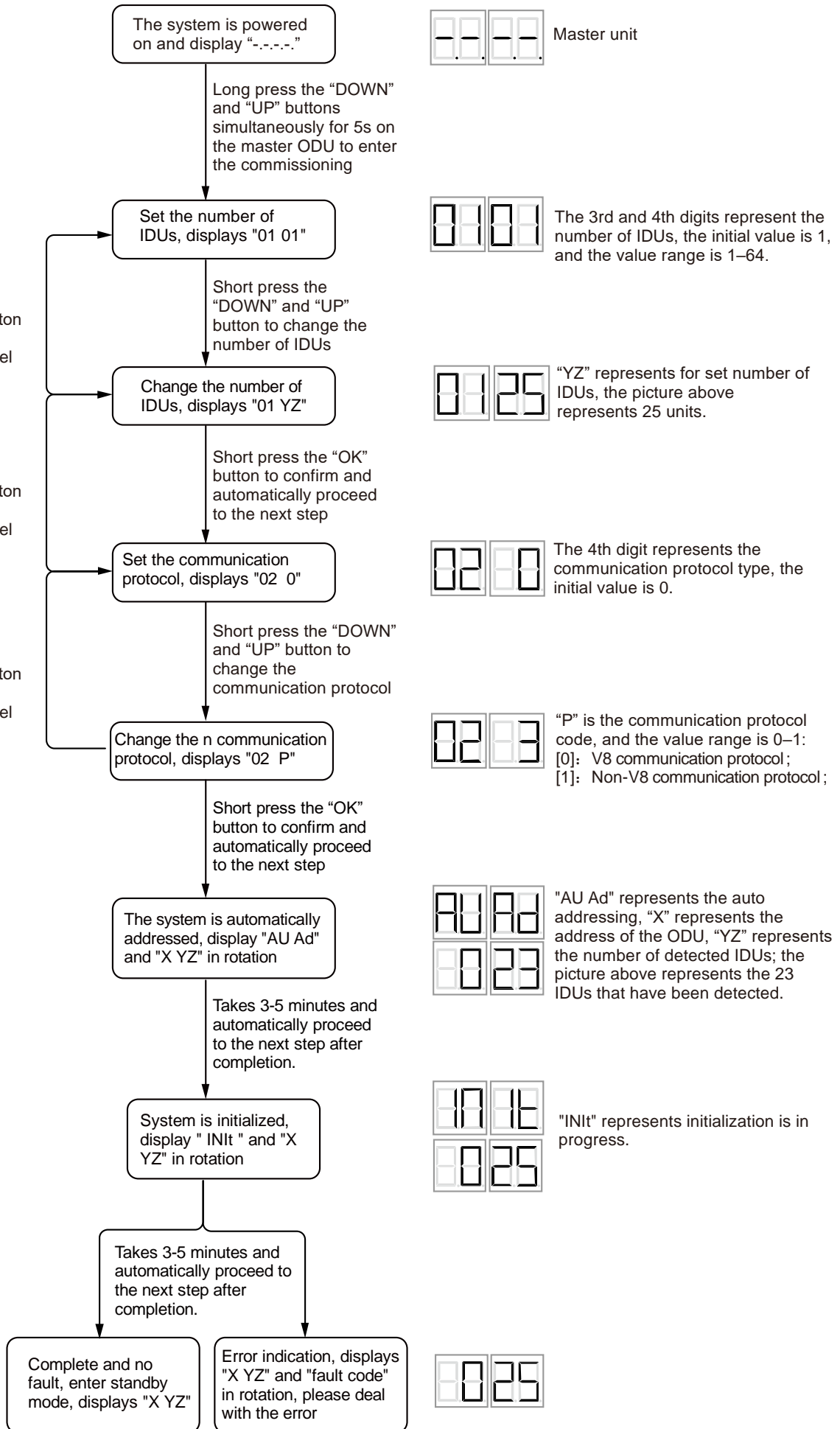
After system initialization, if there is no fault in the system, all ODUs will enter standby mode and the digital display will display "X YZ" ("X" represents the address of the ODUs, "YZ" represents the number of detected IDUs), and the unit can be turned on normally.

After system initialization, if the ODU detects a fault, the digital display of master ODU will display "X YZ" ("X" represents the address of the ODU, "YZ" represents the number of detected IDUs) and the error code in rotation. Please refer to the Error Code Table for troubleshooting, and the unit can be turned on normally after the fault is cleared.

### Step 8: Other settings

After completing the test run, you can set the relevant functions of the unit according to the actual functional requirements. For specific operations, please refer to related technical documents. If there is no special requirement, you can skip this step.

Figure 3-11.1: Test Run Procedure



### 11.3 Multi-system Projects

For projects with multiple refrigerant systems, each independent refrigeration system (i.e. each system of up to three outdoor units and their connected indoor units) should be given a test run independently, before the multiple systems that make up a project are run simultaneously.

### 11.4 Operating the system

#### 11.4.1 Commissioning test run of single refrigerant system

After completing the above steps, a test run should be performed as described below and a System Commissioning Report (see Part 3, 11 “Appendix to Part 3 – System Commissioning Report”) should be completed as a record of the operating status of the system during commissioning.

Note: When running the system for commissioning test runs, if the combination ratio is 100% or less, run all the indoor units and if the combination ratio is more than 100%, run indoor units with total capacity equal to the total capacity of the outdoor units.

The test run procedure is as follows:

1. Open the outdoor unit liquid and gas stop valves.
2. Turn on the power to the outdoor units.
3. If manual addressing is being used, set the addresses of each indoor unit.
4. Leave the power on for a minimum of 12 hours prior to running the system to ensure that the crankcase heaters have heated the compressor oil sufficiently.
5. Run the system:
  - a) Run the system in cooling mode with the following settings: temperature 17°C; fan speed high.
  - b) After one hour, complete Sheet A of the system commissioning report then check the system parameters using the UP/DOWN button on each outdoor unit’s main PCB and complete the cooling mode columns of one Sheet D and one Sheet E of the system commissioning report for each outdoor unit.
  - c) Run the system in heating mode with the following settings: temperature 30°C; fan speed high.
  - d) After one hour, complete Sheet B of the system commissioning report then check the system parameters using the UP/DOWN button on each outdoor unit’s main PCB and complete the heating mode columns of one Sheet D and one Sheet E of the system commissioning report for each outdoor unit.
6. Finally, complete Sheet C of the system commissioning report.

#### 11.4.2 Commissioning test run of multiple refrigerant systems

Once the commissioning test run of each refrigerant system has been satisfactorily completed as per Part 3 “Commissioning test run of single refrigerant system”, run the multiple systems that make up a project simultaneously and check for any abnormalities.

## **12 Appendix to Part 3 – System Commissioning Report**

A total of up to 11 report sheets should be completed for each system:

- One Sheet A, one Sheet B and one Sheet C per system.
- One Sheet D and one Sheet E per outdoor unit.

MDV8 ECO Series System Commissioning Report – Sheet A

SYSTEM INFORMATION			
Project name and location			Customer company
System name			Installation company
Commissioning date			Agent company
Outdoor ambient temp.			Commissioning engineer
Power supply (V)	L1-L2		L2-L3
			L3-L1

OUTDOOR UNIT INFORMATION			
	Master unit	Slave unit 1	Slave unit 2
Model			
Serial no.			

	OUTDOOR UNITS												
	Master unit			Slave unit 1			Slave unit 2			Slave unit 3			
	Compressor suction pipe temperature												
	System pressure at check port												
	Phase currents (A)	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Within normal range?													

COOLING MODE PARAMETER RECORD (After running in cooling mode for one hour)	INDOOR UNITS							
	(Sample of over 20% of the indoor units including the unit farthest from the outdoor units)							
	Room no.	Model	Address	Set temp. (°C)	Inlet temp. (°C)	Outlet temp. (°C)	Drainage OK?	Abnormal noise/vibration?

Part 3 - System Design and Installation

MDV8 ECO Series System Commissioning Report – Sheet B

Project name and location	System name
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OUTDOOR UNITS													
Master unit				Slave unit 1			Slave unit 2						
Compressor suction pipe temperature													
System pressure at check port													
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	
Phase currents (A)													
Within normal range?													
INDOOR UNITS													
(Sample of over 20% of the indoor units including the unit farthest from the outdoor units)													
Room no.	Model	Address	Set temp. (°C)	Inlet temp. (°C)	Outlet temp. (°C)	Drainage OK?	Abnormal noise/vibration?						

MDV8 ECO Series Engineering Data Book

HEATING MODE PARAMETER RECORD  
(After running in heating mode for one hour)

MDV8 ECO Series System Commissioning Report – Sheet C

<b>Project name and location</b>	<b>System name</b>
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RECORD OF ISSUES SEEN DURING COMMISSIONING				
No.	Description of observed issue	Suspected cause	Troubleshooting undertaken	Serial no. of relevant unit
1				
2				
3				

OUTDOOR UNIT FINAL CHECKLIST				
	Master unit	Slave unit 1	Slave unit 2	Slave unit 3
System check performed?				
Any abnormal noise?				
Any abnormal vibration?				
Fan rotation normal?				

	Commissioning engineer	Dealer	MDV representative
<b>Name:</b>			
<b>Signature:</b>			
<b>Date:</b>			

MDV8 ECO Series System Commissioning Report – Sheet D

Project name and location		System name		
DSP1 content	Parameters displayed on DSP2	Remarks	Observed values	
			Cooling mode	Heating mode
--	"Standby (ODU address+ IDU number)/frequency/special status"			
0--	Outdoor unit address	Master unit: 0; slave units: 1, 2 255 represents invalid address.		
1--	Outdoor unit capacity	Actual value = value displayed (HP)		
2--	Number of outdoor units	Only available for master unit, 1-4		
3--	Number of indoor units set	Only available for master unit, 1-64		
4--	Total capacity of outdoor unit	Only available for master unit, 0 displayed on slave units has no sense		
5--	Target frequency of this ODU	Refer to Note 1		
6--	Target frequency of ODU system	Target frequency= value displayed ×10		
7--	Inverter compressor A actual frequency (Hz)	Actual value = value displayed		
8--	Inverter compressor B actual frequency (Hz)	Actual value = value displayed		
9--	Operating mode	Refer to Note 2		
10--	Fan A speed index (rpm)	Actual value = value displayed		
11--	Fan B speed index (rpm)	Actual value = value displayed		
12--	Indoor heat exchanger pipe (T2) average temperature (°C)	Actual value = value displayed		
13--	Indoor heat exchanger pipe (T2B) average temperature (°C)	Actual value = value displayed		
14--	Main heat exchanger pipe (T3) temperature (°C)	Actual value = value displayed		
15--	Outdoor ambient (T4) temperature (°C)	Actual value = value displayed		
16--	Liquid pipe (T5) temperature (°C)	Actual value = value displayed		
17--	Microchannel heat exchanger inlet pipe (T6A) temperature (°C)	Actual value = value displayed		
18--	Microchannel heat exchanger outlet pipe (T6B) temperature (°C)	Actual value = value displayed		
19--	Inverter compressor A discharge (T7C1)temperature (°C)	Actual value = value displayed		
20--	Inverter compressor B discharge (T7C2) temperature (°C)	Actual value = value displayed		
21--	Inverter compressor A suction (T71) temperature (°C)	Actual value = value displayed		
22--	Inverter compressor B suction (T72) temperature (°C)	Actual value = value displayed		
23--	Outdoor heat exchanger gas (T8) temperature (°C)	Actual value = value displayed		
24--	Inverter module heatsink (Ntc)temperature (°C)	Actual value = value displayed		
25--	Reserved for heat recovery unit's T9 temperature (°C)	Actual value = value displayed		
26--	Outdoor heat exchanger liquid (TL)temperature (°C)	Actual value = value displayed		
27--	Discharge superheat degree (°C)	Actual value = value displayed		
28--	Primary current (A)	Actual value = value displayed /10		
29--	Inverter compressor A current (A)	Actual value = value displayed /10		
30--	Inverter compressor B current (A)	Actual value = value displayed /10		
31--	EEVA position	Actual value = value displayed × 24		
32--	EEVB position	Actual value = value displayed × 24		
33--	EEVC position	Actual value = value displayed × 4		

Table continued on next page ...



**MDV8 Series System Commissioning Report – Sheet E**

<b>Project name and location</b>	<b>System name</b>
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*... table continued from previous page*

DSP1 content	Parameters displayed on DSP2	Remarks	Observed values	
			Cooling mode	Heating mode
34.--	EEVD position	Actual value = value displayed × 4		
35.--	Compressor discharge pressure (MPa)	Actual value = value displayed × 0.01		
36.--	Compressor suction pressure (MPa)	Actual value = value displayed × 0.01		
37.--	Number of indoor units on line	Actual value = value displayed		
38.--	Number of indoor units operating	Displayed on master unit PCB only		
39.--	Heat exchanger status (outdoor unit)	Refer to Note 3		
40.--	Special mode	Refer to Note 4		
41.--	Silent mode	0-14 ,14 represents the most silent		
42.--	Static pressure mode	Refer to Note 5		
43.--	Target evaporator (Tes) temperature (°C)	Actual value = value displayed Refer to Note 6		
43.--	Target condenser (Tcs) temperature (°C)	Actual value = value displayed Refer to Note 6		
45.--	DC Voltage (V)	Actual value = value displayed		
46.--	AC Voltage (V)	Actual value = value displayed		
47.---	Number of cooling mode IDUs	Actual value = value displayed		
48.--	Number of heating mode IDUs	Actual value = value displayed		
49.--	Capacity of cooling mode IDUs (HP)	Actual value = value displayed		
50.--	Capacity of heating mode IDUs (HP)	Actual value = value displayed		
51.--	Refrigerant volume judgment	Refer to Note 7		
52.---	Dirty blockage rate	0~10, 10 represents the worst		
53.--	Fan error			
54.---	Software version			
55.--	Last error code			
-- --	--	End		

- Notes:
- Need to convert to current compressor output volume, example: compressor output volume is 70, Target frequency = Actual frequency \* 70 / 60 Outdoor unit capacity setting:
  - Operating mode:
    - 0: off; 2: cooling; 3: heating; 5: main cooling (for heat recovery unit); 6: main heating (for heat recovery unit).
  - Heat exchanger status:
    - 0: off; 1: C1: condenser. running 2: D1: condenser. not running; 3: D2: reserved; 4: E1: evaporator. running 5: F1: reserved; 6: F2: evaporator. not running
  - Special mode:
    - 0: no special mode; 1: oil return; 2: defrost; 3: start up; 4: stop; 5: quick check; 6: self cleaning.
  - Static pressure mode:
    - 0: 0 Pa; 1: 20 Pa; 2: 40 Pa; 3: 60 Pa; 4: 80 Pa;
  - Te: Low pressure equivalent saturation temperature (°C) Tes: Target Te value.  
Tc: High pressure equivalent saturation temperature (°C) Tcs: Target Tc value.
  - Refrigerant volume:
    - 0: No result; 1: Significantly insufficient; 2: Insufficient; 3: Normal; 4: Excessive; 5: Significantly Excessive.

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Note: Product specifications change from time to time as product improvements and developments are released and may vary from those in this document.

